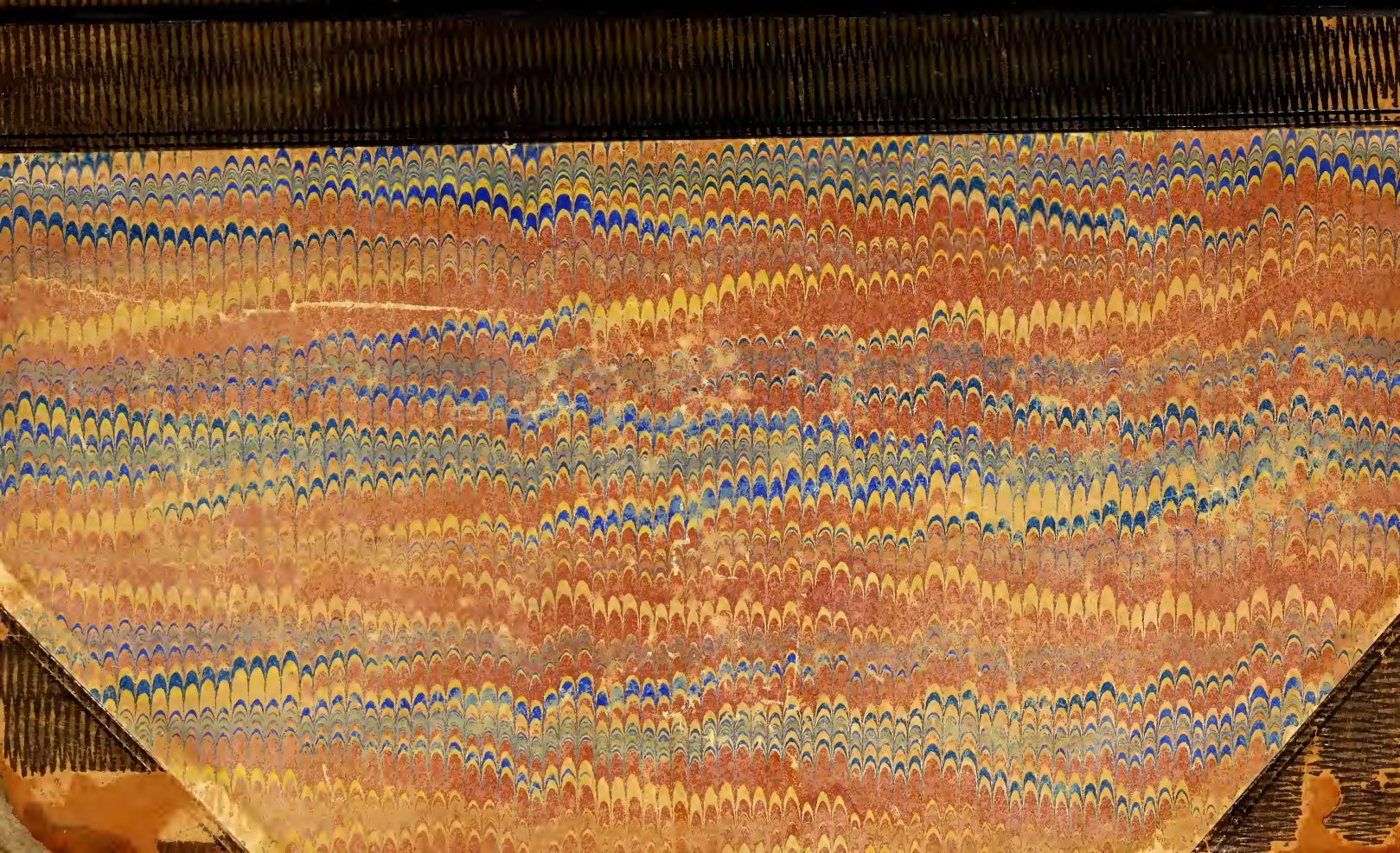

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DEPARTMENT OF AGRICULTURE.
SPECIAL REPORT—No. 49.

REPORT

UPON THE

CONDITION OF CORN AND COTTON,

OF

POTATOES, FRUITS, ETC.;

ALSO,

FREIGHT RATES OF TRANSPORTATION COMPANIES.

SEPTEMBER, 1882.

WASHINGTON:
GOVERNMENT PRINTING OFFICE.
1882.

SEPTEMBER REPORT.

DIVISION OF STATISTICS,
DEPARTMENT OF AGRICULTURE,
September 12, 1882.

SIR: I have the honor to submit for publication the September report upon the condition of cereals, potatoes, cotton, tobacco, sorghum, fruits, the comparative numbers of fattening swine, &c. Also, the September report of freight rates of transportation companies upon the principal products of agriculture.

Respectfully,

J. R. DODGE,
Statistician.

Hon. GEORGE B. LORING,
Commissioner.

CROP REPORT FOR SEPTEMBER.

CORN.

The corn crop, in all the region south of Pennsylvania and of the Ohio River, is in high condition, in every State except West Virginia, represented by 100 or higher figures. In many districts of the South the crop is reported the best in twenty years. In the New England States there has been a very sharp decline, except in Vermont; from 91 to 75 in Maine, 95 to 62 in New Hampshire, 87 to 60 in Massachusetts, 93 to 70 in Rhode Island, and from 96 to 65 in Connecticut. A decline of eight points in New York and New Jersey, and of four in Pennsylvania is indicated. The loss in all these States is due to drought, which has been especially severe in New England. There has been abundant rain in all other States. In the corn-growing States of the Ohio Valley the prospects average very nearly as at the last report.

The general average of condition is 83, the same as in August. Last year there was a decline from 77 in August to 60 in September. In 1880 the September average was 91. If early frosts do not injure the crop the product will be materially larger than last year, but the heavy production of 1879 and 1880 cannot be approached under the most favorable circumstances.

The drought has been so severe in Maine that only half a crop of corn is expected in Sagadahoc and Androscoggin. In York it is reported that one-fourth of the crop is dead and one-fourth dying. In Waldo, Lincoln, and other counties its severity is deplored. In Merrimack, New Hampshire, entire fields of corn are without a single ear. In Hillsborough, Cheshire, and Stafford the effects of drought are very severe. Throughout New England there has been depreciation from this cause, though it is comparatively slight in Vermont, where improvement has of late occurred under the reviving influence of light showers.

New York statistical agent:—The wet spring caused a reduced acreage of corn. The estimate for September is less than that of August. The unusual drought, extending all over the State during the month of August, has had the effect to reduce the number of ears and prevent them from filling out. In some sections the corn has dried up so much that the growth has been arrested. The prospect is good that the later planted will mature before the autumn frosts, as the ears are already set and the weather is still warm and favorable. Fields badly cultivated and weedy suffered most during the drought. Early-planted fields which were well tilled are up to the average. The great shrinkage in the corn crop is owing to the cold and wet weather at time of planting, which gave the crop a late and poor start, except on land of the most favorable character, and made vacant spots. The continued wet weather prevented thorough tillage.

The crop has been greatly improved in New Jersey by August rains, which will suffice to make a good yield of all that was not too early to be benefited by the change.

There is some complaint of drought in Pennsylvania, yet August rains have been quite well distributed. The crop is somewhat late, and may be caught by frost in some sections.

The condition of corn in the South is generally very high. There is mention of some impairment by drought in Orange, Warren, and Westmoreland, Virginia. Cool nights in July have not been favorable in Middlesex. It is difficult to find causes for discouragement, as a rule, and a majority of the correspondents report unusual fruitfulness. From North Carolina to Texas excess of rain has done more damage than the want of it.

Coming to Texas, there is little to mar the almost universally favorable report. Very few counties report the influence of drought; among them Brazos, Shelby, Panola, and Van Zandt. Dry winds in July injured the prospect in Hardeman.

Arkansas reports improved prospects, which are characterized in Monroe County as "simply magnificent." There would have been a better result, if possible, in Tennessee with less rain. It has interfered somewhat with cultivation and maturation. The growth is generally immense. Several correspondents call it the best crop in twenty years.

There has been too much rain in West Virginia, and the crop is somewhat late, yet the general average stands at 89. Kentucky shares

with Tennessee a very high condition. The season, since the mishaps of planting, has been sufficiently long and favorable to place the crop above the average of condition. Still, there are locations where too much water proved injurious.

In Ohio the untoward spring has left marks of injury that no subsequent influences of soil or weather can efface. The crop will fall far short of a fair average. It is late, and not yet entirely out of the reach of frost.

In Michigan the burden of complaint is lateness. In some counties maturity will not be attained until the middle of September; in the more northern, the first of October. "If the frost holds off" a fair yield is generally expected.

Michigan statistical agent:—The late spring put the corn crop from two to three weeks behind. Its growth was slow until the warm rains set in on the 1st of August. Then followed three weeks of fine growing weather, which saved the corn crop of Michigan. Unless injured by early frosts the yield will be abundant.

Indiana statistical agent:—The cool weather in April, followed by the wet weather of May and June, caused many to think there would not be more than half a crop of corn raised. But the more favorable weather of late has so improved the condition that unless there should be early frosts there will be a two-thirds crop this fall. The southern portion of the State reports a higher condition than either the central or northern.

Illinois, the great corn-growing State, will have a small crop, the general average standing at 56. The following extracts will illustrate the character of returns:

ILLINOIS.—*Tazewell:* There has been wonderful improvement; three weeks of good corn weather, and we will have a crop on high ground. *Jo Daviess:* Considerable improvement; may make three-fourths of crop. *Carroll:* Three weeks more without frost and we will have a fair crop. *Iroquois:* Early frost will do much damage *Jersey:* Rain has improved the prospects; if frost does not come early may make two-thirds of crop. *Kendall:* Growing finely, but will need thirty or forty days to mature. *Woodford:* The indications are now that corn may mature; in that event may make half crop. *Christian:* Is improving very much, if frost will only stay off. *Edgar:* Will make one-third more than last year. *Peoria:* Corn is still a problem; a warm, dry September will increase my estimate 20 per cent. *Kankakee:* The weather has been favorable during August. *Moulton:* Very late and weedy. *Saint Clair:* This has been the most perfect season ever known; all crops are perfect. *Brown:* Timely rains have benefited the crop; if frost holds until the 1st of October will have twice the crop we thought of six weeks ago. *Winnebago:* Month of August fovorable; if warm weather continues three weeks longer will get a fair crop. *Wabash:* Will be about 50 per cent of an average crop. *Vermillion:* Is improving; warm and showery weather. *Putnam:* Is doing well; ten days late. *Piatt:* Improved since last report; fair crop expected if frost holds off. *Perry:* Rains in August helped the corn crop. *Livingston:* Weather damp; improved very much in the past ten days. *Lee:* If the frost holds off six weeks we will make 65 per cent. *La Salle:* If weather is favorable the next six weeks about three-fourths of a crop is expected. *Henry:* If frost holds off thirty days there will be a fair crop. *Grundy:* Weather favorable; still two weeks late. *Fulton:* Improved much in August. *Fayette:* In fine condition. *De Kalb:* Promises well. *Cumberland:* Has improved since last report; favorable weather will insure three-fourths crop. *Clark:* Much improved in August; about one-half crop expected. *Pike:* Will be well cared and heavy; weather very favorable. *Warren:* Crop will be light.

The crop is late in Wisconsin, but improving, and frost is the only contingency feared. "Everything is favorable if the frost holds off twenty days," remarks the correspondent of Dunn County. In Vernon it will require a month to bring maturity. In Columbia an early frost would ruin the crop, but August weather continued in September would secure a large yield. In Waupaca the most favorable weather would produce but half a crop. The general average of the State is 79.

The crop of Minnesota is at least two weeks late, and is therefore in some jeopardy from the frost. Safety cannot be assured until October.

There are local differences in the Iowa corn prospect. In Des Moines excessive rains in July were injurious. In Adair, Page, and Pottawattamie rain is needed. In Calhoun there is an expectation of 50 bushels per acre. The improvement has generally been great during the past month.

The reports from Missouri are remarkably promising. The most prosperous year ever known is reported by some correspondents.

Kansas statistical agent:—Nine-tenths of the corn area is on bottom lands, and hence the continued dry weather, lasting from the fore part of August until the present time, has not so seriously damaged the crop as it would were the area on the uplands. Ninety per cent. of the corn acreage is in the eastern and central portions of the State and will make more than an average crop. The other tenth, lying in the west, is almost a failure. Taking these proportions into consideration, I place the average condition of corn for the State at 104. All early varieties maturing in August have made a very large yield, and this has gone far to keep the general average. It is a point that ought to be well considered by Western farmers, that early varieties of corn have uniformly made a good crop, while of the late varieties the yield has been all the way from very good to an absolute failure.

Returns from Nebraska are favorable, with few exceptions. In Hall, Red Willow, and Richardson there is some complaint of drought.

WHEAT.

The result of the spring wheat harvest is in close accordance with the indications of the August report. The quality is good, and the yield above an average. The general condition of winter and spring wheat, when harvested, is represented by 100, an average rarely attained. In parts of the winter wheat region, especially in Michigan and Indiana, some millions of bushels have been lost by sprouting in the stack. There has also been some loss of spring wheat from the same cause in Wisconsin and other States.

The Ohio Valley has nearly as large a product as in 1879. Ohio, Indiana, and Illinois have apparently secured about 142,000,000 bushels. The South has increased both her acreage and yield per acre. The aggregate of winter wheat, as indicated by the September returns, is about 380,000,000 bushels; of spring wheat, about 140,000,000, or 520,000,000 in all. The thrashing test may slightly modify these figures. The first thrashing generally exceeded expectation; the later thrashing has in many sections been disappointing. It is quite certain that

the per capita supply of wheat will not be quite so large as in 1879 or 1880.

Wheat growers and consumers may rest assured that the reports of 600,000,000 bushels and 300,000,000 surplus are gross exaggerations. The surplus cannot much exceed 200,000,000, and one-sixth of that will be required to restore to average fullness the local stocks and farmer's surplus, which were reduced at the close of the crop year as never before. Growers may suffer loss by holding for higher prices; they are still more likely to lose by accepting prices founded on a belief that 60 per cent. of the crop can be exported, when scarcely more than 35 can well be spared.

The Ohio statistical agent says that returns from some 2,000 thrashers show 7,066,554 bushels of wheat thrashed from 424,417 acres, making the average yield per acre 16½ bushels. He reports the area of wheat in Ohio at 2,745,507 acres, and estimates the aggregate product of the State to be 45,143,546 bushels.

New York statistical agent:—The yield of wheat as estimated in August is sustained by the thrashing. Reports are made of large yields. H. S. De Forrest, Schenectady, 100 acres, 24½ bushels to the acre; E. Howard, Fort Hunter, 15 acres, 31 bushels to the acre—both Clawson variety, and grown on Mohawk River flats, without manure. Large yields are reported to have been produced in the old Genesee wheat region, going as high as 40 bushels and up to 54. Wheat was harvested generally in the best of order.

Michigan statistical agent:—Just at harvest time wheat was in a magnificent condition and promised an aggregate yield of 32,000,000 bushels. About July 31 a steady rain, accompanied by high temperature, set in and continued about ten days. In the southern counties, owing to an earlier harvest, the most of the wheat was secured before the rain, and the greatest damage was done in the central part of the Lower Peninsula, which was just in the midst of harvest. Fully 25 or 30 per cent. of the crop was injured so as to be reduced in grade or rendered fit only for feed.

Illinois statistical agent:—The 1882 crop of winter wheat is the largest, with one exception (1880), harvested in the State, and amounts to over 50,000,000 bushels. The spring wheat crop will make the aggregate yield a little over 52,000,000 bushels. The average yield is not far from 18½ bushels per acre, which is but little below that of 1879, when the largest average yield per acre was obtained. The area of the present crop, 2,752,108 acres, has been exceeded but twice (1880 and 1881). The quality of wheat is much better than an average, and has seldom, if ever, graded more uniformly high throughout the State. The crop was saved in good condition, and either thrashed or stacked immediately after harvest.

Kansas statistical agent:—The wheat crop was secured in very good condition. The crop was a phenomenal one, the yield exceeding the most sanguine expectations. The crop was very uniform, the difference in condition being occasioned by the difference in soils alone. A small proportion has been thrashed, and the yields are beyond the estimate.

California statistical agent:—The crop of wheat now about harvested has exceeded the approximate yield that it was placed at during the bad outlook in April, at which time the north wind, which has so disastrous an effect upon all kinds of vegetation in this State, seemed to be blowing with the intention of exterminating our cereals; but the cool and exhilarating weather of May and June was most favorable for its growth. While the acreage is about 25 per cent. below last year, the yield will be fully up to the average, and it is estimated by conservative judges that our crop for export will be about 650,000 tons, or about 50 per cent. of the extraordinary year of 1880, while it will equal any average year prior to 1880.

OATS.

The oats crop when harvested was in universally high condition, yielding heavily in thrashing. The general average is 100, very few States falling below that figure, among them New Jersey, Pennsylvania, Maryland, and Virginia. As there was an increase in area in most of the States, the aggregate will be the largest crop ever reported.

RYE.

The rye crop is also above the average in nearly all the States, and was harvested in good condition.

BUCKWHEAT.

New York and Pennsylvania produce a large proportion of the crop. The average of present condition for the former State is 87, of the latter, 100. The indications are favorable for a nearly average yield. There is an acreage a little larger than last year in New England, and very nearly up to last year's breadth in the Middle States.

New York statistical agent:—Notwithstanding the increased area of this crop, and the flattering start it made, the hot sun prevailing during August has blasted it badly, and the dry weather has checked the growth, causing premature ripening. A reduced estimate is the result of these adverse conditions, of 12 per cent., which may be too high, as the crop will not probably exceed 75. Correspondents report the crop as "short," "small," "very light," "half a crop," and very few as "good."

SORGHUM.

Sorghum is very promising in the South. North of 35° the averages fail to reach normal condition, except in the middle belt of the Atlantic coast. In the West the average is 87.

Kansas statistical agent:—The majority of the sorghum area lies in the central and western counties. It not being affected by dry weather so much as other field crops' is in a fair condition. A great deal of interest is being taken in the western and southwestern portions of the State in the culture of sorghum. The area increased this year over last 50 per cent., and during the last two years several large mills have been put in operation. A very extensive one at Sterling, Rice County, is now running, and experiments are being made by experts at that point.

POTATOES.

The average condition of potatoes in August was 101; it has fallen in September to 92. Last year the decline during August was from 92 to 70, and continued in a greater ratio till harvest. The prospect is now favorable for a crop of not less than 150,000,000 bushels, from the present outlook. The decline has been heaviest in New England and New York. The prospect has improved in Maryland and Virginia, has been well maintained in the Ohio Valley and Lake region, and has not materially changed west of the Mississippi. Only Wisconsin and Kan-

sas of the Western States fail to show average of 100 or higher. Maine stands lowest, at 65.

The changes since the July report, in the States of principal production, are as follows:

States.	September.	August.	July.
Maine	50	100	102
New York	78	100	108
Pennsylvania	97	102	107
Ohio	105	102	103
Michigan	107	102	111
Indiana	107	107	106
Illinois	104	104	106
Wisconsin	91	103	111
Minnesota	102	105	113
Iowa	105	107	108

These States produce seven-tenths of the crop of the United States. It will be seen that there is no indication of low production except in the Northeast. An examination of the table of returns by States will show that there is no material decline in any State south or west of New York and New Jersey.

Massachusetts statistical agent:—Dry weather has greatly injured all that were planted on high land, and also those that have been hilled. Very early potatoes yielded a fair crop of good size, but late ones will be very small, many fields scarcely worth digging. The potato beetle has visited the potato fields in the usual numbers, and has had to be kept in check by Paris green or London purple. The damage is quite serious, and cannot amount for the State to less than $150,000.

New York statistical agent:—Early potatoes are generally reported as a full average and of excellent quality, while the late varieties are estimated at not more than half a crop. This is for the yield, the acreage being more than an average; 10 per cent. of this reduction in yield should be charged to the beetles and the remainder to the want of seasonable rains. In some counties, where the drought has been excessive, the crop is reported by special correspondents as very light, while in others as fair.

Michigan statistical agent.—Although put back by the late season, the growing weather of August pushed the potato crop rapidly ahead, and the prospects are good of an average crop.

There is report of inferior quality in Salem County, New Jersey. Wet weather has caused rot in Cambria, McKean, Mercer, and Venango. Other counties in Pennsylvania report good quality. Clarke and Coshocton, in Ohio, report the prevalence of rot; Osceola and Saint Clair, in Michigan; Scott, in Indiana; Kane, Lee, McHenry, and Whitesides, in Illinois; Buffalo, Dane, Dodge, La Fayette, Marquette, Rock, Sheboygan, Saint Croix, Washington, and Waupaca, Wisconsin; Houston, Olmsted, Ramsey, Rice, Winona, Wright, and Steele, in Minnesota; Audubon, Clinton, Howard, Franklin, Hardin, Lucas, and Mitchell, in Iowa. The present month will determine the distribution and extent of the decay.

COTTON.

The September report of the Department of Agriculture, on the condition of cotton, shows improvement since the 1st of August in Virginia, North Carolina, Tennessee, Arkansas, and Texas, and some deteriora-

tion in South Carolina, Georgia, and States of the Gulf Coast to Louisiana, inclusive. The general average of August was 94; of September, 92; which is the same as in September of 1880, and higher than in any other season for ten years. Last year the average dropped from 88 in August to 70 in September. The State averages are as follows: Virginia, 89; North Carolina, 88; South Carolina, 95; Georgia, 89; Florida, 83; Alabama, 90; Mississippi, 88; Louisiana, 89; Texas, 101; Arkansas, 100; Tennessee, 89. These figures indicate, as they stand, a large crop; but from every quarter comes the intimation of too much rain for heavy fruiting, too much "weed," some shedding of bolls, a tendency to rust, and a later development of bolls than usual. Under these conditions, early frost would be especially injurious. The caterpillar has made its appearance in many counties of the Gulf coast States. In some places the second generation is "webbing up." While the damage is inappreciable as yet in most cases, fears are expressed that the third brood may do great injury. The boll worm is reported at many points; in Denton County, Texas, their destruction is estimated at a value of $100,000.

Average condition of cotton in September.

Years.	Virginia.	North Carolina.	South Carolina.	Georgia.	Florida.	Alabama.	Mississippi.	Louisiana.	Texas.	Arkansas.	Tennessee.	General average.
1873	98	95	86	90	85	85	82	80	92	93	92	87
1874	99	87	86	77	77	81	74	62	65	47	52	79
1875	100	90	80	76	75	87	98	88	94	99	96	90
1876	106	93	91	90	83	83	87	90	87	97	119	91
1877	86	83	84	77	94	91	88	92	70	99	100	86
1878	83	86	80	81	91	92	89	83	101	98	91	89
1879	84	83	81	82	85	84	89	87	66	99	107	85
1880	102	100	93	95	91	86	88	88	97	95	90	92
1881	72	72	68	71	87	80	74	76	65	55	62	70
1882	89	88	95	89	83	90	88	89	101	100	89	92

NORTH CAROLINA.—*Gaston:* The growth has been rapid, and it has fruited well during August. *Beaufort:* Frequent and heavy rains have done serious damage. *Greene:* Injured by rain. *Jones:* Does not promise as well as at last report—too cold and wet. *Duplin:* Has gone back since last report, owing to almost incessant rain, is rusting and shedding. *Halifax:* The weed is fine and is blooming well, but is very late. *Lincoln:* The plant is large and well fruited; will make a full crop unless very early frost comes. *Wayne:* Will make about two-thirds of a crop. *Stanly:* Plant large and well fruited. *Union:* There is too much rain for cotton. *Tyrrel:* Great injury from wet weather; cannot make more than half crop. *Pamlico:* The prospect was splendid, but has been ruined by wet weather, which caused it to shed. *Wilson:* Has rust on light soil. *Pasquotank:* Too much rain for cotton. *Johnston:* Has too much weed. *Robeson:* Incessant rains have caused shedding.

SOUTH CAROLINA.—*Fairfield:* Very fine; will reach 150. *Abbeville:* The prospect is very fine. *Barnwell:* Drought done some injury in a portion of the county. *Chester:* Injured by excessive rains in August. *Colleton:* There is too much rain for cotton; it is shedding its fruit. *Hampton:* Rust prevails generally; condition not so good as 1st of August. *Lexington:* Growing too much to weed, but is promising. *Marion:* Fall-

ing off of 15 per cent. since August 1. *York:* Blessed with the best crop within the recollection of the "oldest inhabitant." *Anderson:* Constant rains prevent opening. *Newberry:* Injured by constant rains. *Edgefield:* Frequent rains have caused unnatural growth, giving to the inexperienced eye too flattering a prospect. *Williamsburg:* Too dry first half of August, and too wet since then.

Georgia statistical agent:—Cotton is below an average in fruitage, though the weed is large. In the southern part of the State the plant has been seriously injured by rust. The cool nights during spring and summer have so retarded the growth that many of the bolls which are now estimated by the casual observer will not mature before frost. The unusual growth of weed resulting from the continued rains is deceptive and not favorable to heavy fruiting. From present indications the crop will be 10 per cent. below an average if the fall is favorable, and still further below if frost occurs early.

GEORGIA.—*Banks:* The stalk is very large, but is fully a month late; the only hope for full crop is a late, warm fall. *Baker:* Badly damaged by excessive rains. *Cobb:* There has been too much rain for cotton. *Colquitt:* Too much rain. *Columbia:* Rusting, which will cut off the yield. *Dooly:* Badly injured by rust. *Elbert:* Too much rain; too sappy to mature fruit. *Lincoln:* Cool nights and heavy rains have caused rust and serious injury. *Marion:* Too much rain, causing red rust. *Meriwether:* Result depends upon late fall. *Warren:* Injured by rust. *Worth:* Rusting and shedding badly; opening badly. *Forsyth:* Cannot make more than three-fourths of a crop. *Montgomery:* Has been very much injured by rust, caused by wet weather. *Polk:* There is too much rain. *Talbot:* The continued wet weather is very injurious. *Bibb:* Injured by rust since last report. *Decatur:* Badly damaged by July and August rains. *Gwinnett:* The plant is large but not well fruited. *McDuffie:* Badly affected with rust. *Terrell:* Rust pretty generally prevails. *Wilkinson:* Too much rain first part of August, causing rust. *Baldwin:* Is not in a satisfactory condition; rust threatens considerable damage; there is too much rain. *Brooks:* Some injury from rust. *Burke:* Severely attacked by rust; prospect not near so good as at last report. *Carroll:* Large plant, but poorly fruited, being injured now by rust and army worm. *Coweta:* The army worm has made its appearance, but has done but little harm. *Effingham:* Wet weather is retarding picking cotton. *Fulton:* Dropping fruit; too much rain. *Gordon:* Yield depends upon late or early frost. *Hart:* Is opening very slowly; too much rain. *Johnson:* Rust is general and has done great injury; in many places the stalk is as dry as in December. *Milton:* Run too much to weed. *Newton:* The boll worm has just got to work and is likely to do damage. *Pulaski:* Wet weather and rust have caused much injury. *Putnam:* There is too much rain for cotton on gray land. *Sumter:* Prospect not so good as on 1st of August; too much rain. *Upson:* Rust and the boll worm have very materially lowered the condition since 1st of August. *Webster:* Continued heavy rains have caused rust. *Whitfield:* Great improvement during August. *Crawford:* The only cause of complaint is the wet weather. *Paulding:* There has been too much rain. *Thomas:* Incessant rains retard picking, and caused boll rot; the prospect is seriously injured. *Jasper:* Late, but the promise is fine. *Tattnall:* Injured 20 per cent. since last report by rains. *Bartow:* Weed large; possibility of heavy yield; too much rain. *Laurens:* Very wet, cotton rusting. *Murray:* Very good; if we have late fall will go above my figures. *Wilcox:* Wet weather has caused rust and shedding.

FLORIDA.—*Columbia:* Shedding its fruit, caused by too much rain. *Gadsden:* Since last report rains have caused it to shed. *Marion:* The caterpillar has just made its appearance, but will not do much harm. *Madison:* The caterpillar has made its appearance. *Washington:* July and August rain caused rust, which is now general; the prospect is gloomy. *Jackson:* Rusted on old lands, nearly all open where fertilized. *Suwannee:* Rains have caused shedding. *Putnam:* Shedding slightly; too much rain, but continues to fruit, and with favorable September will exceed last year.

ALABAMA.—*Randolph:* Worms are just making their appearance. *Cleburne:* Wet weather has caused too great growth of weed. *Dale:* The caterpillar and boll-worm

are here, the latter doing much damage. *Henry:* Badly damaged by rust. *Jackson:* Weedy and sappy; not fruiting well. *Lowndes:* Greatly damaged by continued heavy rains, which cause it to rust; boll-worm also doing some damage. *Monroe:* There is too much rain, and the grass worm is doing some damage. *Chilton:* Shedding rapidly from too much rain. *Clarke:* Large weed and bolls scattering; too much rain. *Crenshaw:* Damaged by wet weather. *Macon:* There is too much rain; should it continue a little longer, the damage cannot be estimated now. *Pike:* Suffered from insects and rust. *Blount:* Too much rain; growth unprecedentedly large; lower bolls are rotting; there are some worms. *Coffee:* Too much rain; lower bolls are rotting; caterpillars have put in an appearance. *Bullock:* Excessive rains and rust have injured it. *Dallas:* Has declined 10 per cent. since last report; rust and weather the causes. *Sumter:* Seriously damaged by excessive rains: boll-worm also has done some damage. *Talladega:* The most promising crop for years. *Barbour:* Wet weather, rust, and boll-worm have done serious damage; caterpillars are here. *Escambia:* Remarkably rainy; will cause shedding. *Russell:* On sandy lands constant rains have caused it to rust and shed. *Saint Clair:* If rains continue many days longer cotton will be ruined. *Colbert:* Late maturing and opening. *Conecuh:* Rained every day in the county since the 4th day of July; has damaged cotton. *De Kalb:* Rather too much rain for cotton. *Franklin:* A great deal of rain; the plant very large; if September is dry will make large crop. *Green:* Continued rains since 15th July have materially altered condition. *Limestone:* Large weed, but it is feared that wet weather will injure it. *Marengo:* Considerable damage from wet weather. *Marion:* Late and bad stand; if frost is early the crop will be short. *Marshall:* Shedding from wet weather; caterpillars are at work. *Montgomery:* Picking is under full headway. *Perry:* The wet weather and boll-worm have done considerable damage. *Shelby:* Excessive rains cause rust and shedding of leaves. *Choctaw:* Wet weather has caused great injury from shedding. *Winston:* Running to weed and shedding; too much rain.

Mississippi.—*Kemper:* The weed is large, but the joints are long, and is not well fruited. *Grenada:* Injured by excessive rain, and in some instances entirely drowned out; the boll-worm has been very destructive, and is still at work. *Adams:* Very much injured by continued rains; plant gone to weed; bottom bolls rotting. *Choctaw:* Rain is injuring cotton some. *Copiah:* Weed large; is shedding; too much rain; the boll-worm is damaging it; the caterpillar is here, but has not done much damage yet. *Newton:* Too much rain; the boll-worm has begun its ravages. *Tishomingo:* Too much rain. *Benton:* Is in better condition than the most sanguine expected a month ago. *Greene:* Much damage from excessive rains. *Marshall:* Promises well; no casualties so far. *Oktibbeha:* Seriously damaged by constant rains since last report. *Sunflower:* We have had too much rain for cotton. *Wayne:* Injured by constant rains. *Attala:* Two much rain. *Hinds:* Badly damaged by rain; caused it to shed; worms have made their appearance. *Lauderdale:* Poor crop on lowlands; on uplands, good; not much damage from worms. *Lee:* Damaged by wet weather. *Lowndes:* Very much injured by continued rains. *La Fayette:* Too much rain, causing it to shed; a few worms have appeared. *Sharkey:* Very promising, but army worm has appeared in small numbers, and may do serious damage. *Sumner:* The prospect is very fine; very little injury from worms. *Wilkinson:* Excessive rains have caused too rank growth and shedding of young fruit. *Yazoo:* Has fallen terribly behind, owing to constant rains. *Jefferson:* Crop very grassy; month behind in picking, and cannot recover. *Le Flore:* Too much rain; stock large and woody. *Winston:* Wet weather caused rank growth and shedding of bolls and squares.

Louisiana.—*Washington:* Very much damaged by wet weather, which causes the bolls to rot before maturing. *Madison:* The second crop of cotton worms are now webbing up; no damage; the third crop are due in three weeks, and if they come will likely do great damage. *Sabine:* Heavy continued rains cause the bolls to rot. *Saint Helena:* Almost daily heavy rains cause it to shed its forms and run to weed; the

worm is now webbed up, and we fear great damage from them. *Caddo:* The continued heavy rains for last two months have caused very large and luxuriant growth on alluvial lands, but greatly injured by shedding. *Calcasieu:* Injured by protracted rains. *Concordia:* Greatly improved since last report; the third crop of worms are expected about 10th September, which may lessen crop one-third. *Red River:* Rain, rain has been the order of the day, causing cotton to rust, blight, and shed, and grow too rank. *Cameron:* Being badly damaged by too much rain. *Grant:* Hill cotton better than before; bottom land injured by wet weather. *Pointe Coupée:* Recent rains have much injured cotton. *Saint Tammany:* Injured 10 per cent. by rain. *La Fayette:* Continued heavy rains have caused shedding and rotting of bolls; the worm is on many farms; no damage as yet. *Rapides:* Owing to excessive rains, the condition is most unpromising; worms have appeared in some localities; no damage yet. *Saint Martin's:* Continued rains are damaging the prospect. *East Carroll:* The weed is very large, but fruit is scarce. *De Soto:* Gone too much to weed, and has shed its forms; the second crop of caterpillars has appeared, but not in sufficient numbers to do any great damage. *Franklin:* Very large weed, and growing too rapidly; long jointed and not well fruited; bottom bolls rotting. *Avoyelles:* Second generation of worms have appeared, but no serious damage done. *Bienville:* Injured by too much rain. *Iberrille:* Materially damaged by rot and shedding. *Tangipahoa:* Rain every day since middle of July, which has done damage. *West Feliciana:* Large weed, but not well fruited. *Claiborne:* Too much rain is endangering the crop. *Winn:* Being eaten on bottom lands by caterpillars; on uplands is injured by rust; nevertheless expect over an average crop.

TEXAS.—*Brazos:* Uplands not up to an average from drought; river bottoms above an average. *Brown:* The prospect is fine if worms do not come. *Callahan:* The crop is wonderful; best ever known. *Comanche:* Weed is very rank; cut-worm is doing damage. *Grayson:* The most abundant crop for years. *Gregg:* Rust has played sad havoc for last fifteen days; more rust than for fifteen years. *Hays:* Prospect very fine. *Parker:* Never looked better. *Rains:* Very promising; no worms. *Washington:* The caterpillar is doing some damage. *Cooke:* Better than was thought at last report. *Erath:* The outlook is very promising; some little damage from boll-worm. *Hamilton:* There is too much rain. *Morris:* The prospect is good; there are some boll-worms. *Shelby:* The crop will be a large one if no disaster overtakes it. *Somerrell:* Has been injured by rains and overflows since last report. *Denton:* The boll-worm has already injured the crop of the county $100,000. *Caldwell:* Opening rapidly. *Lavaca:* Worms are now making their appearance, but the crop will probably exceed last year's. *Hopkins:* Best crop for many years. *Jackson:* The worm is doing some damage, but is not so numerous as usual. *McLennan:* Some boll-worms, but no material damage yet. *Red River:* Injured by too much rain; the boll-worm is at work. *San Patricio:* Prospect flattering; no worms. *Falls:* Some worms, but no damage; are now webbed up, and it will take three weeks for their return. *Austin:* The worm is all over the county, and is doing some injury now. *Bexar:* The crop is just splendid. *Cass:* The most flattering prospect for years; I think Cass will be entitled to the blue ribbon. *Colorado:* The army and boll worm have not been general, and have not done much harm. *Dallas:* With a dry September and October the crop will be large; picking has commenced. *Harrison:* Some fields are entirely stripped by the caterpillar; others not touched; the boll-worm is at work; the prospect is not flattering. *Matagorda:* Too much rain. *Panola:* There was some damage from boll-worm, and the caterpillar is fairly at work. *Wise:* Large weed, but not well fruited. *Coleman:* Fear rains will make it too stocky, and hurt bolls. *Chambers:* Dry June and July made it late, but favorable weather will develop very large product. *Live Oak:* Good condition; picking in progress. *Burnet:* Picking hindered by rain. *Karnes:* Suffered from hot and dry June and July, but doing well ever since. *Ellis:* The best prospect I ever saw, though there are some complaints of boll-worm *Titus:* The unusual amount of rain has done a great deal of damage. *Kaufman:*

Could not look more promising. *Coleman:* Fear that rain will make it too stocky and hurt bolls. *Chambers:* Too late from dry June and July, yet growing fast, and if not injured by worms, will give large yield.

ARKANSAS.—*Saint Francis:* As good as in 1879; was never better. *Calhoun:* Is turning out better than anticipated. *Prairie:* August, which is the cotton month, was never more favorable. *Union:* Very promising. *Arkansas:* Too much rain, causing to run to weed. *Dorsey:* Never saw so fine a promise before. *Columbia:* Rust and boll worm have made their appearance in the last few days; there is too much rain. *Hempstead:* Army worm has made its appearance in bottom lands. *Jefferson:* Wet weather has done some damage, especially on low lands. *Phillips:* The army worm has just made its appearance, and may do serious injury. *Jackson:* The army worm has made its appearance; no damage yet. *Crawford:* Done well during August. *LaFayette:* Has not done well during August; too much rain. *Izard:* Growing rapidly and making too much weed. *Dallas:* Warm, rainy weather during August has stimulated too rank growth. *Monroe:* Great growth of weed; continued wet will destroy bottom crop, but with dry weather to October 15 an immense crop. *Fulton:* Well fruited, but two weeks late. *Howard:* Much rain; excessive growth and boll-worm. *Bradley:* The weed is very large, but is not fruited according to size.

TENNESSEE.—*Hardeman:* Notwithstanding all the set-backs it has had, the present prospect indicates three-fourths of a crop. *Dyer:* Bids fair to make an average crop if we have an open fall and late frost. *McMinn:* Too much rain for cotton. *Tipton:* A drought for the last twenty-five days has clouded cotton prospects. *Williamson:* Great improvement; will make good crop if frost comes late. *Bedford:* The weed is so rank that the bolls cannot mature or open unless we have dry weather. *Lincoln:* Not doing well; too much rain. *Sumner:* Never was better. *Shelby:* Four weeks late, but is looking very finely.

FRUIT.

The apple crop will be a very small one for an "even year." In New York, Michigan, and Maine a serious reduction from the August return is reported. In New Hampshire and other Eastern States the prospect is somewhat better. The high figures are for some of the newer States, especially Kansas and Nebraska, and some of the Southern States, none of which affect the general market.

The peach crop has been a good one from New Jersey to Maryland, and in Mississippi, Texas, and Arkansas, in the Missouri River region, but poor in Michigan and the Ohio Valley generally.

Grapes have produced more abundantly, but have been somewhat reduced in quality by the severity of spring frosts north of 36°.

Massachusetts statistical agent:—Apples have felt the drought quite as much as field crops; large quantities have dropped off, and what remain on the trees are much below the usual size.

New York statistical agent:—The returns for apples show a reduced crop from the August report, owing to the extensive dropping caused by dry weather, fruit injured by insects, and the ravages of the aphis, which have been quite destructive in some counties, viz, Oswego, Ontario, Wayne, and Monroe, and in other sections. The estimate for August, for the above reason, is reduced. The yield of apples is much less in the western part of the State—the apple counties—in proportion to the number of trees, than in the eastern. In some of the counties where apples are a leading staple the estimate is put as low as 33, 25, 20, and 10. Special correspondents characterize the crop, in some localities, as a comparative failure. The trees blossomed full, but there is a general complaint of blasting on account of cold and high winds, and in some cases of continuous rains, which destroyed the pollen and prevented the fruit from setting.

Michigan statistical agent:—Although this is the year when apples should have yielded bountifully, the crop is one of the worst failures known for many a year. The bloom was very promising, but late frosts and raw east winds about the time of "setting" did great damage. The young fruit was also weakened by a long succession of cold nights, and dropped before attaining any size.

Georgia statistical agent:—Fruit culture is receiving increased attention annually. If satisfactory rates of transportation can be secured on fruit and fresh vegetables, their production for shipment to Northern cities will rapidly increase. Shipments of peaches by refrigerator cars to Chicago from Atlanta this summer were satisfactory to the grower, both as to rates and prices received. The Leconte pear, which grows with wonderful rapidity and fruits very heavily, is grown very profitably in the southern part of the State. They are readily propagated by cuttings. One gentleman reports an average of $44 gross per tree from twenty bearing trees. The peach crop in the southern part of the State has been almost a total failure. Many of the trees blossomed, without putting forth leaves, from one to three months after the usual time for blooming. Very many of the trees died after lingering late into the spring. The budded trees suffered more severely than seedlings. It is thought that the sap was started by the warm weather in winter and suddenly checked by a cold spell.

STOCK HOGS.

The high price of hogs has caused a heavy drain upon the supply. There has been an increase of the number for fattening in Minnesota, where stock interests are in a state of development, and in Dakota, Washington, Montana, and Arizona. In Florida there has also been increase. Numbers are quite well maintained in New England. There is a small decline in the Middle States and in the South. In Kentucky the decrease from last year, as returned by our correspondents, is 25 per cent.; 29 in Ohio; 25 in Indiana; 24 in Illinois; 20 in Iowa; 30 in Missouri. The decrease is but 5 per cent. in Kansas and 2 in Nebraska.

New York statistical agent.—Hogs have been scarce during the year, as the high price of pork last winter induced farmers to put as many as possible on the market, so that the old stock is less than an average. The cold spring caused more than the average loss of young pigs, which has reduced the number to be fattened. Owing to the high price of corn during the summer, hogs have been kept on shorter feed, and are not in ordinary condition at this time of the year.

Massachusetts statistical agent.—Stock hogs are looking well, and do not seem to have felt the dry weather; this is probably because greater efforts are made to furnish comfortable quarters than formerly.

ITEMS FROM STATE REPORTS.

GROWN WHEAT FOR SEED.

A letter to the Michigan statistical agent suggests that "grown" wheat may be used advantageously for seed. While it is a safe rule to use the most mature, the perfect seed of all plants for planting, the suggestion is presented for consideration.

Take the very worst samples you can pick out of a crop of wheat and thoroughly dry it, then sow it in your garden, and you will note, with perhaps some surprise, but far more pleasure, that the previous growth of the kernel will not interfere with a second, third, or fourth germination. The theory upon which this depends is this: that a

wheat kernel contains, instead of a germ, a nucleus of them. This we can see at any time hereafter by watching the growth from a single kernel. First we will notice a single blade or leaf, resembling grass, though heavier. Then we see another and another added, which soon produce a "stool of wheat," as it is familiarly called by the farmer. These facts being proved to the satisfaction of wheat growers, and there is no loss at all on the wheat used for seed.

EFFECTS OF DROUGHT.

Massachusetts statistical agent:—Many fields have dried up so badly that the driest portions have been cut up and fed to cattle. Some fields of corn, on quite dry land, have been carried through the drought with but little injury by keeping the surface of the soil well pulverized about an inch in depth. What is true of corn is true of other crops, particularly of potatoes. From practical tests, covering many years, I am satisfied that at least one-half of the losses to hoed crops by drought can be prevented by level culture and keeping one inch of the top of the soil loose and free from weeds.

Maine statistical agent:—Pastures generally through the State are in an extremely unproductive condition, and are dried and parched beyond realization. For the entire month of August farmers making a specialty of the milk or butter dairy have been obliged to feed their cows from the barn not only corn fodder and early-cut hay, but also a ration of provender every day. In no other way have they been able to maintain the flow of milk sufficient for demands, and even with this management the product is greatly lessened. Were it not for an unusually large hay crop, with the severe drought affecting corn and grain, it would be a discouraging outlook for the farmer to be obliged to be feeding from the floor in the month of August almost a full winter ration of forage and provender, and that with the fields and pastures yet suffering from drought and promising a very light quantity of (at least early) fall feed.

Colorado statistical agent:—Alfalfa, or, more correctly, lucerne, does well under irrigation—which is necessary for the first two years—in the rich, sandy loam that abounds in the valley lands of Colorado. There it takes root rapidly, is of prolific growth, and yields heavily. Its value as food for stock of all descriptions has been fully demonstrated by a few farmers in the vicinity of Denver, who express the opinion that is is far superior to ordinary clover or meadow hay. They give it as their experience that ten hogs or twenty sheep can be sustained the year round on a single acre of alfalfa, and that horses fed on it require but one-third the amount of grain that is necessary when other hay is used. A few ranchmen I have met feed no grain, and yet their horses are in excellent condition. There is one field of alfalfa situated on the north side of the South Platte River, owned by a former Washingtonian, General J. Brisbin Walker, from which two crops (yielding two tons of fodder at each cutting) have been harvested this season, and the owner expects to make another cutting before frost. This expectation, if it is realized, will make a total yield of six tons per acre of good, nutritious food from a field of this clover that will probably not require reseeding during the period of its owner's lifetime.

FLORIDA CROPS.

Florida statistical agent:—The staple field crops of this State must ever be sugar cane long staple cotton, rice, and sweet potatoes. The cane is never injured by frosts south of 28°, and grows all the year, and averages 7 feet of ripened cane. Sweet potatoes lie in the ground and are dug every month. They are generally planted between June 1 and September 15; some few are planted between March 1 and May. A new potato of light yellow skin and flesh, short root, very mealy and sweet, is generally raised south of 28°. It increases in size till it is a year old, unless the tops are destroyed. Rice is grown on both wet and dry land, and may be planted in drills and hills, and must be kept clean of grass and weeds. The yield is from 20 to 60 bushels, in the rough—average, 30. Corn must ever be a subsidiary crop, and owing

to climate and soil, the yield be less than the demand for the State. The weevils enter the ears in the field, and by April they will have destroyed the grain. It is to be hoped that casava and arrowroot will also form a large field crop. It must do so as soon as their manufacture into starch shall be commenced. The great staple crop of Florida must ever be its fruits. The orange may be trusted as far north as the 30th parallel, and in highly favored localities in the northern counties. The lemon, lime, and citron can be safely planted to the 28th, and in favorable locations to the 29th. The grape fruit and shaddock are nearly as hardy as the orange. The guava thrives well below the 28th, as does also the custard apple tribe and mango. The sapadillo and cocoanut thrive below the 26th, and in favorable localities to the 27th. Pineapples and bananas can be grown as far north as the 28th, on all the dry lands, when properly fertilized. Of these the citrics, cocoanuts, and pineapples bear transportation to the markets of the northern cities, and should be named in the reports. The others will be consumed in Florida, or preserved in cans.

MINNESOTA CROPS.

The Minnesota statistical agent presents the following estimate of grain and potato crops of Minnesota, showing acreage, standard average, and per cent. of yield for 1881 and 1882, with estimated yield in 1882:

Grains, &c.	Acreage in 1882, computed from returns to county auditors.	Standard average yield per acre in bushels.	Per cent. of such average yielded in 1881.	Estimated per cent. of such average for yield of 1882.	Estimated aggregate yield in 1882.
					Bushels.
Corn	736,430	32	97	97	22,092,900
Wheat	2,547,677	15	80	110	40,035,471
Rye	26,028	15	94	105	409,941
Oats	845,119	32	94⅓	115	31,100,379
Barley	308,287	24	87½	110	8,138,776
Buckwheat	5,530	10	120	90	49,770
Potatoes	54,148	100	107	98	5,306,504
Sorghum	8,461	80	105	95	*Gals.*, 634,375

DRAINING.

Iowa statistical agent:—This season has demonstrated the importance of draining the level or flat lands of this State. The western portion of Iowa, which is rolling, will have fair corn crops, while the southeastern portion of the State, which is flat, will be a failure. In many places where the corn was dropped in a furrow, the crop was abandoned, whereas if the land had been well tilled, or the corn had been planted on a ridge of two furrows, having been thrown together, fair crops could have been raised.

CORN CANNING.

Maine statistical agent:—One of the great agricultural interests of the State is the growing of sweet corn for canning purposes. Three packing concerns in this State, last year, canned a total of 355,000 cases of sweet corn, of two dozen cans each. These three companies operated in 1881, twenty-six factories. They will this season operate thirty factories, having a largely increased acreage; and yet in consequence of the extreme drought, their total business this season cannot be above 300,000 cases. These three concerns represent about four-fifths of the corn canning business of the State, a large number of small local factories having been established within the past two or

three years. In one instance, that of the factory at Gorham, of the Portland Packing Company, for which 225 acres of corn was planted, the factory will not operate, the crop having been a failure from the drought, and the product (stored) having been cut for fodder, or put into ensilage.

STOCK GROWING.

Colorado statistical agent:—That the raising of cattle in Colorado has been very profitable (particularly so during the last two seasons), is demonstrated by the experience of those who have been engaged in the business since it was a Territory. That under like circumstances, it will continue to be so, is more than probable, but evidently the limit of live-stock production on the range in Colorado is about reached. Moreover joint-stock companies, and wealthy individuals who are owners of vast herds, are monopolizing the water privileges of the State, and by this means are fast crowding out those who own but a limited number of cattle.

GRASSES.

Georgia statistical agent:—Bermuda grass, formerly dreaded as a pest by cotton planters, is now being extensively utilized in Middle Georgia as a hay grass. The owners of some of the plantations, which were abandoned on account of the Bermuda, are making more money from hay than was ever made from cotton on the same lands. On rich, moist lands it affords repeated cuttings of hay of the best quality. For summer pasturage it is not surpassed by any grass on earth in nutritive qualities, or the number of stock it will sustain per acre. The prejudice against this valuable grass is rapidly disappearing, and many farmers are setting a part of their land in it. It bears no seed in the Southern States, but may be easily and rapidly propagated from the roots and stems.

Experiments with the "rural branching sorghum," which proves to be identical with the Millo maize of Colombia, South America, recently introduced by Rev. Mr. Pratt, of South Carolina, are so far very satisfactory. It tillers immensely and produces a very large quantity of forage and seed per acre. The seed of this plant constitutes a large part of the bread product of the Colombian States of South America.

TEMPERATURE AND RAINFALL.

The Signal Service records of temperature show that the average of the country for July was below the average of a series of years, except by a slight excess in New England and on the Pacific coast. The drought which has afflicted the Eastern States commenced in July, and continued with considerable severity all through August. The rainfall of July was deficient in the Eastern and Middle Atlantic States, in the Rio Grande Valley, the Ohio Valley and Lake region, the Missouri and upper Mississippi States. There was an excess nearly throughout the Southern States, both the Atlantic and Gulf coasts, and in the extreme northwest. At Mount Washington the rainfall in July exceeded 10 inches, and was 40 per cent. more than usual. The following tables are from the Signal Service Bureau:

Average precipitation for July, 1882.

Districts.	Average for July Signal Service observations.		Comparison of July, 1882, with the average for several years.
	For several years.	For 1882.	
	Inches.	*Inches.*	*Inches.*
New England	4.09	3.11	0.98 deficiency.
Middle Atlantic States	4.25	3.62	0.63 deficiency.
South Atlantic States	5.17	6.90	1.73 excess.
Florida Peninsula	6.09	6.53	0.44 excess.
Eastern Gulf States	4.59	7.00	1.41 excess.
Western Gulf States	4.21	6.16	1.35 excess.
Rio Grande Valley	2.00	1.58	0.42 deficiency.
Tennessee	4.11	3.55	0.56 deficiency.
Ohio Valley	4.93	3.19	1.74 deficiency.
Lower Lake Region	3.66	2.32	1.34 deficiency.
Upper Lake Region	3.52	2.86	0.66 deficiency.
Extreme Northwest	2.53	4.09	1.56 excess.
Upper Mississippi Valley	4.40	3.29	1.11 deficiency.
Missouri Valley	4.54	3.42	1.12 deficiency.
Northern Slope	2.59	1.75	0.84 deficiency.
Middle Slope	2.55	1.85	0.70 deficiency.
Southern Slope	2.94	5.98	3.04 excess.
Northern Plateau	0.91	0.17	0.74 deficiency.
Middle Plateau	0.37	0.17	0.20 deficiency.
Southern Plateau	2.47	1.65	0.82 deficiency.
North Pacific Coast	0.70	0.82	0.12 excess.
Middle Pacific Coast	0.01	0.00	0.01 deficiency.
South Pacific Coast	0.07	0.07	Normal.
Mount Washington, New Hampshire	7.17	10.03	2.86 excess.
Pike's Peak, Colorado	5.24	2.13	3.11 deficiency.

Average temperatures for July, 1882.

Districts.	Average for July Signal Service observations.		Comparison of July, 1882, with the average for several years.
	For several years.	For 1882.	
	°	°	°
New England	70.2	70.6	0.4 above.
Middle Atlantic States	75.9	75.2	0.7 below.
South Atlantic States	80.9	78.7	2.2 below.
Florida Peninsula	82.5	82.0	0.5 below.
Eastern Gulf States	81.8	77.6	4.2 below.
Western Gulf States	83.1	80.4	2.7 below.
Rio Grande Valley	86.0	84.8	1.2 below.
Tennessee	76.4	76.1	0.3 below.
Ohio Valley	77.4	72.3	5.1 below.
Lower Lake Region	71.8	69.1	2.7 below.
Upper Lake Region	69.3	65.1	4.2 below.
Extreme Northwest	69.2	64.6	4.6 below.
Upper Mississippi Valley	75.2	69.2	6.0 below.
Missouri Valley	76.5	71.6	4.9 below.
Northern Slope	70.9	67.5	2.4 below.
Middle Slope	75.6	72.8	2.8 below.
Southern Slope	82.5	79.5	3.0 below.
Northern Plateau	69.1	70.2	1.1 above.
Middle Plateau	74.7	73.6	1.1 below.
Southern Plateau	80.7	80.4	0.3 below.
North Pacific Coast	65.0	64.9	0.1 below.
Middle Pacific Coast	71.0	72.0	1.0 above.
South Pacific Coast	75.5	75.9	0.4 above.
Mount Washington, New Hampshire	48.1	46.7	1.4 below.
Pike's Peak, Colorado	40.7	36.2	2.5 below.

EUROPEAN CROP PROSPECTS.

The cable message from our statistical agent in London, dated September 11, is as follows:

Reported improvement in European crops is confirmed. The wheat crop of Germany is better than was expected; of France, a full average. The price of wheat is constantly falling everywhere. The Vienna Congress claims the world's wheat supply above average.

SPECIAL AGENCY OF THE DEPARTMENT OF AGRICULTURE,
London, September 1, 1882.

Hon. GEORGE B. LORING,
Commissioner of Agriculture:

SIR: At the present writing the consensus of opinion on the English crops is that the brilliant weather of the first two weeks of August has been of the utmost value to the farmer, and has been most effective in producing a good yield. The spring was not unpropitious, and the hope of the British farmer was for a warm, sunny summer June and July were cold and wet, and the outlook became gloomy. August changed the whole aspect of affairs, and although the weather has of late been unsettled, the general prospect is that the cereal crops are the best for seven years. The best estimates give wheat a good average of 10,000,000 to 11,000,000 quarters; barley, oats, and rye a full average, and possibly more; hay, 125; potatoes, more than an average, although disease has been prevalent. The hop crop is the only exception in the list, and the result is almost a total failure. Combined with the bad reports from the Continent and America, the price is rising rapidly. In a country consuming as much beer as England this would be disastrous, were it not that of late years the cheaper way of manufacturing and adulterating beer has become common, so much so that it is said that hops, instead of being the basis of beer, are now used mostly for flavoring. This of course does not apply to the better brands.

For a detailed statement of these facts, I respectfully refer to the printed slips in the appendix.

Abroad the general prospect is unchanged. Russia is in doubt, as the extent is so great that comprehensive news of the whole yield cannot yet be obtained.

The official estimate of the wheat crop in Hungary is 37,144,497 centals; barley, 12,982,911; oats, 9,328,324.

After deducting the quantity required for home consumption there will remain a surplus of wheat for exportation of 15,450,000 centals.

The Italian wheat crop is stated to be abundant. The wine produced will be larger in quantity and better in quality than for years past.

France will have a medium, possibly an average, crop of wheat, with reduction in quality.

At an important congress of millers held at Dijon on the 28th of August it was resolved that the present prices of wheat were too high, and must become lower, and that, in spite of the satisfactory yield in France, the millers would need large importation of foreign grain to mix with their own.

The condition of prices for wheat in England is in the same situation, as reflected by the state of the markets and the opinions of correspondents. For a month past wheat has been dropping a shilling a quarter weekly, and the outlook is that the reduction will continue, one writer going so far as to say that the "logical ending will be American wheat at 40*s.* and English wheat at 42*s.*, 46*s.*, and the general situation demands cheapness."

At Mark Lane, yesterday, I heard complaint of the quality of the first shipments of our new wheat. A miller told me that the new flour made from English wheat this year was better than for five years past.

As the harvest returns are yet to a certain extent unsettled, I have merely noted the main points, giving at the same time the full evidence of the press, and will wait a week or ten days before making a fuller report.

I am, sir, your obedient servant,

EDMUND J. MOFFAT,
Special Agent.

THE EUROPEAN HARVESTS.

With the report of the statistical agent is received a mass of current notes and extracts bearing upon the results of the European harvests. The latest date reported is the 4th instant. The English harvest was quite as early as usual, and was facilitated by the use of "string-binding reapers." Harvesting machinery was employed more extensively than formerly. By the middle of August a considerable area in Southern and Middle England had been cut. The English harvest had been completed, except in the north, and in generally good condition, notwithstanding the rainy weather of the latter half of August. Home barns are coming more in favor for housing unthrashed grain. As yet there is little sprouting of exposed stacks. A little mildew is reported in the lowlands. On farms in high cultivation forty bushels per acre is reported. In Scotland the harvest will not be complete till the 20th of September. A fair crop of good quality is expected. The Irish crop is not so good as last year, though it will not be seriously short. The "Miller" makes the following summary of estimates in quarters of eight English bushels:

	Quarters.
The home counties	1,301,250
Southern England	1,153,875
Western England and Wales	1,574,625
Northern England	1,235,625
Middle England	2,026,050
Eastern England	3,661,000
Scotland	290,000
Ireland	425,000
Islands	30,000
	11,697,425

This estimate, from a buyer's standpoint, may possibly be too high. It is probable, with prices not too high, that the British demand will considerably exceed 100,000,000; that France will require from 40,000,000 to 50,000,000; Spain possibly 10,000,000. The Netherlands and Switzerland are always purchasers.

The complaints of delay of the German harvest by rain and a deterioration of quality as thrashing progresses have given a decided firmness to prices, leading to the conviction that the result is somewhat disappointing.

The storms of August were very severe. The damage in Würtemburg by hail-storms (not to crops alone, but in breakage of glass, injury to trees, &c.) is estimated at £600,000.

The crops of Holland have been injured by recent rains.

From Russia there is little that is new regarding the crops, which in some sections are good, but in others distinctly inferior. From north-

ern and southern ports the shipments of wheat have fallen off and are now quite moderate. In the west the harvest is good; but the extreme heat in the south, and from Odessa to Taganrog, along the Black Sea coast, and inland as far north as Kieff, reduced the yield very heavily. In Central Russia the yield is better.

A full average is understood to have been harvested in Roumania, Servia, Bulgaria, and European Turkey.

From India the shipments are proceeding on a comparatively small scale, the total quantity on passage being 145,709 quarters against 284,033 quarters last year.

HOPS.—It has been a disastrous year for hop culture in England. Shriveled leaves and blackened bines, instead of full clusters of bright flowers, are everywhere seen. A few bright spots only may be found in Kent. Of 9,000 acres in Sussex, scarcely 100 have escaped the ravages of *aphides*. The plantations of Hampshire and Surrey are worse, if possible. The lice have been in the fields since April. There has been no such devastation since 1854. Then the yield averaged 183 pounds per acre. It is thought the yield may this year be somewhat larger, as washing has been practiced to a considerable extent. At least 4,000 acres have been thoroughly washed; a proportion has been partially washed in cases where planters hoped the aphides would subside or be destroyed by lady-birds. Where there remained any life worth stimulating, restoratives were applied in the form of nitrates, guano, and other fertilizers. It is thought that the average yield may reach 225 to 250 pounds per acre. The plantations of Belgium have also been injured by aphides. In Germany and Austria prospects have improved, but will not quite make good the effects of unfavorable season and circumstances. The Mark Lane Express says:

> Sanguine persons expect that they will range between £15 and £16 per cwt., but in these days of adulteration and brewing of so-called beer with quassia and rice there is no saying what may happen.

AGRICULTURAL RETURNS OF GREAT BRITAIN.

The statistical agent of the Department of Agriculture in London, Mr. Edmund J. Moffat, has obtained a summary of agricultural returns of Great Britain, from the Comptroller of Corn Returns, in advance of publication. It is given in connection with those of 1880 and 1881, as follows:

EXTENT OF LAND IN GREAT BRITAIN UNDER—

Years.	Wheat.	Barley.	Oats.	Potatoes.	Hops.
	Acres.	*Acres.*	*Acres.*	*Acres.*	*Acres.*
1880	2,909,438	2,467,441	2,796,905	550,932	66,698
1881	2,805,809	2,442,334	2,901,275	579,334	64,943
1882	3,003,915	2,255,139	2,833,815	541,064	65,676
Increase, +; decrease, −.					
1882 over 1881	+198,106, or +7.1 p. ct.	−187,195, or −7.7 p. ct.	−67,460, or −2.3 p. ct.	−38,270, or −6.6 p. ct.	+733, or +1.1 p. ct.
1882 over 1880	+94,477, or +3.2 p. ct.	−212,302, or −8.6 p. ct.	+36,910, or +1.3 p. ct.	−9,869, or −1.8 p. ct.	−1,022, or −1.5 p. ct.

TOTAL NUMBER OF LIVE STOCK IN GREAT BRITAIN.

Years.	Cattle.	Sheep and lambs.			Pigs.
		Sheep.	Lambs.	Total.	
1880	5,912,046	17,186,011	9,433,039	26,619,050	2,000,842
1881	5,911,642	16,143,151	8,437,902	24,581,053	2,048,090
1882	5,807,591	15,571,964	8,746,814	24,318,778	2,510,374
Increase, +; decrease, −.					
1882 over 1881	−104,051, or −1.8 p. ct.	−571,187, or −3.5 p. ct.	+308,912, or +3.7 p. ct.	−262,275, or −1.1 p. ct.	+462,284, or +22.6 p. ct.
1882 over 1880	−104,455, or −1.8 p. ct.	−1,614,047, or −9.4 p. ct.	−686,225, or −7.3 p. ct.	−2,300,372, or −8.6 p. ct.	+509,532, or +25.5 p. ct.

These returns were collected in one day, the 5th of June, 1882, and on the 4th of June in 1880 and 1881. They show an increased area in wheat, and a decrease in numbers of farm animals as compared with 1881. A comparison with 1870 will better show the changes which competition and other modifying circumstances have recently wrought in British agriculture.

The area in wheat in 1870 was 3,500,543 acres, making the decrease in twelve years 496,628; barley, 2,371,739 acres, a decrease of 116,600 acres. Oats have increased 2,763,300 acres in 1870 to 2,833,815 acres in 1872.

Potatoes have a smaller area than 1870 or 1880, though the difference is slight. The acreage in 1870 was 541,064 acres.

The number of cattle has very materially increased in twelve years, from 5,403,317 in 1870 to 5,807,591 in 1882, which, however, is a decrease since 1881. There has been a heavy decline in numbers of sheep, from 28,397,599 in 1870 to 24,318,278 in 1880, including lambs, which are more than one-third of all, or 8,746,814. There has been an increase in "pigs," or swine, from 2,171,138 to 2,510,374.

In brief, there has been in operation a tendency to decrease of wheat, under American competition, and an increase in meat production, in which competition has proved less disastrous than in wheat—a decline in the arable area, and an enlargement of grass crops and permanent pasture.

STATISTICS IN AGRICULTURE.*

The influence of statistics upon agriculture is felt at every point, and is becoming an impelling and guiding force. It is difficult, from the

*The practical uses and utilities of statistics in agriculture are beginning to be understood, vaguely by the multitude, only partially by the trained minds of the practically educated. The following remarks embody a few hastily-conceived suggestions on this subject, which were presented in Section I of the American Association for the Advancement of Science at its recent meeting in Montreal, Canada, by the Statistician of this Department.

wide range of its action, to outline, and especially to limit, its practical opportunities. I have said heretofore that it is the province of agricultural statistics to measure the extent of our vast resources; to contrast the actual with the possible in production by living examples of accomplished results; to weigh the effect of overproduction in the diminution of prices; to illustrate the folly of dependence on distant and uncertain markets for primary products; to show the correlation of the industries and the advantage of augmenting numbers of consumers upon the prices and profits of agriculture; to mark the progress of the sciences in their application to the business of the cultivator, and to aid the ruralist in keeping pace with such progress.

It is by the light of statistics that the emigrating farmer seeks a location, adopts a system of rotation suited to his new circumstances, decides between selling and storing his crops at harvest, and in successive seasons enlarges or restricts the area of a given crop.

It is by the aid of statistics, presented in orderly form by scientific methods, of results of feeding experiments which involve all the intricacies and mysteries of animal physiology and the best labors of chemical analysis, that the problem of successful meat production in the future can be solved. With increase in value of feeding material more rapid than the advance of price of product, the margin of profit is reduced, forcing into prominence the vital question, how to obtain a larger percentage of meat from a given measure of nutrients in feeding. The experiment stations of the present, and especially those of the future, will accumulate data for the expert, showing the loss in flesh-making by exposure, by irregularity in time or quantity of feeding, by an excess of succulent feed for an extended period, followed by another in which a ration of antipodal dryness and harshness is constantly repeated. Such statistics may harmonize the discrepant views of chemists and feeders upon the value of ensilage and the utility of the silo; may show the physiological necessity for variety in feed and the extent of its economy; may possibly teach how meat may be made in winter as well as summer, upon hay and grain as well as grass. If successful upon these points, it is not an exaggeration to say that two pounds of meat may be made where one was produced before, and upon nearly the same quantity of raw material, so great is the present waste in meat production.

The controlling influence of statistics is strikingly apparent in the progress of sheep husbandry. The co-ordination of facts showing results of breeding, in weight and density of fleece, and capacity for flesh-taking, is followed promptly by enlargement of flocks and increase of price; on the contrary, an exhibit of sudden reduction in price of wool sweeps the pastures as with a very besom of destruction, as in 1868, when four millions of peltless carcasses went into the rendering caldron, the oil to be reserved for various uses, the macerated flesh to be cast upon the dunghill. The facts telling how slight the causes of fluctuation in numbers, and even abandonment of the industry, by many

wool growers, emphasize the necessity of a uniform tariff policy, to be modified only, as the necessity of circumstances may dictate, with practical wisdom and rare caution. At the same time statistics may avert the disaster of panic, in part at least, by comparing the ultimate profit of those of cool judgment and wise persistence with the failure of those who buy at the highest and sell at the lowest prices. The increase in production in twenty years, from 75,000,000 pounds to 300,000,000, and from a value of $20,000,000 to $80,000,000, marks a period of the highest prosperity of this industry, and suggests as well its procuring causes. At the same time an enlargement of the proportion of domestic wool used in manufacture, from half in 1862 to four-fifths in 1882, while the volume of total aggregate manufacture has been so swollen, goes far to prove the ultimate interests of grower and manufacturer to be in harmony, if not absolutely identical.

Statistics have been useful in reducing the overweening egotism of the cotton interest, which assumed the regency of production and the dictatorship of foreign exchange. They prove that a corn crop is worth two or three of cotton, and that the area of maize in the cotton belt exceeds the acreage of cotton; that while the production of the fiber has been greatly enlarged, the value of exports has been reduced from 60 to 30 per cent. of the volume of exports of products of agriculture. The cereals have taken the leading position in export, and the products of the plebeian hog alone equal in value half the export of the patrician crop. Further, by statistics is shown the superior economy in cotton production itself through its subordination to diversification and rotation in a general system of cropping. A knowledge of this result in the grouping of recent facts in the economies of this culture is already producing a marked effect, reducing the cost and enlarging the net profit of production. The South is beginning to profit by the lesson which the actuary teaches of the destructive effect of debt and interest, and is learning to avoid a twelve months' mortgage of the growing crop, which is all the more deadly because it involves prices enormously high for all supplies and goods purchased on credit. The South is also learning to gauge the profits of cotton manufacture, to count the gains from cheap and now unemployed labor, and the savings of freights and commissions, and to test all these advantages by actual results of experience with those accruing to manufacture in the Northern States and in Europe. The result is seen in rapid increase of factories, destined in the near future to become still more numerous, until the distribution of the raw material shall approximate equality in proportion between the South, the North, and Europe. Nothing but a disregard of the teachings of statistics, or a lack of enterprise or means, will prevent such a consummation in the next twenty years.

Deductions from statistics enable us to determine whether agriculture is progressive or retrogressive. Relative to this great industry in the United States, the showing is generally favorable to progress more

or less rapid. As an example, wheat-growing illustrates in many directions this progressive tendency. The most remarkable fact in connection with this crop is its vast breadth—37,000,000 acres; more than twice the area of wheat in France, and more than double the area of fifteen years ago. During the same period the population has increased but about 50 per cent. Nor has the number of farms or the farm area increased by such a ratio. It is not difficult to seek the causes, through the aid of statistics. The most prominent is undeniably the advance in invention, as well as development of skill in manufacture of machinery for breaking and cultivating the soil and for harvesting the ripened grain. The manufacturers of these implements have given a greater impetus to wheat production than the farmers themselves. Next to this cause is the ingress of foreigners seeking a farm and home, and the possibility of obtaining one upon the prairie, which is ready for the plow and for a crop sooner grown and more salable than any other.

This advance in the ratio of product to population is not a halting movement, but continuous through a long period, with accelerated stride. Fortunately the census years have been sufficiently close to an average in production for an essentially fair comparison. The average product per capita was $4\frac{1}{3}$ bushels in 1849; in 1859 it was $5\frac{1}{2}$; in 1869 it had become 7.28, and in 1879 it was 9.2 bushels. In thirty years, with more than 100 per cent. increase in numbers to be fed, the supply for each individual mouth was doubled. It is not strange that the United States can export from one-third to four-tenths of every crop, and that however short a particular crop may be, there has as yet been no lack of a sufficiency both for home consumption and for exportation.

Not a State of the East, West, or South produced in 1879 more than 8 bushels per capita, and New England averaged but a third of a bushel, or less than a month's supply. Minnesota produced most of all in proportion to population, 44 bushels to each inhabitant; Oregon, next in rank, 42; California, third, 34; Nebraska, 31; Washington Territory, 26; Indiana, 24; Michigan, 22; Dakota, 21; Wisconsin, 19; Kansas, 17; Illinois, 17; Idaho, 17; Ohio, 14; Missouri, 12 bushels. The rank in proportion to population does not represent the order of aggregate production, Illinois ranking first in 1879, Indiana second, Ohio third, and Michigan fourth, Minnesota being fifth, and the first of the spring wheat States of the Northwest. The production of the Ohio Valley was nearly 50 per cent. more than that of the Northwest, each district representing nearly the same area, or about 10,000,000 acres each.

The distribution of wheat production, as illustrated by systematic statistics, points many a lesson of farm economy and exhibits the controlling influence of soil, climate, and the circumstances of the cultivator. We see that only twelve States of thirty-eight and two of the ten Territories are reliable for a surplus, while a majority of all do not produce their own bread. New England gets as large a yield per acre as any other section, but feels the competition of the West, and needs

her available acres for such perishable commodities as milk and fruits and vegetables. The South has a considerable extent of good wheat soil, but an unsuitable early summer climate, and a disregard for the cultivation of anything but cotton and corn, consequently getting an average yield scarcely more than half that of the principal wheat-growing section. Better preparation of the soil, large fall growth of the roots, winter pasturing when necessary, secure vigorous growth and ripening of a large crop before the heats of summer blast otherwise fair prospects. If grown judiciously in winter, a good yield is reasonably sure. In the West, where three-fourths of the crop is grown, the general tendency is to decrease of rate of yield west of the Mississippi and increase it in the Ohio Valley. Statistics would show this result more conclusively should the opening of new lands in the Northwest be duly considered Upon the same soil, as a rule not without exception, the second, sometimes the third, crop is larger than the first; but in ordinary practice, after subsequent croppings, the land becomes foul with weeds, insects increase, and production declines. This is the usual result, as classified records prove, due to the errors of superficial culture and continuous cropping far more than to exhaustion of the soil itself. In the Ohio Valley a different system prevails, rotation is more regarded, drainage is more extensively practiced, better culture prevails, and the yield per acre is increasing. The former want of system will cure itself. While settlement extends the primitive practice, a lapse of a few years of cultivation covers its rise and decline, and marks the commencement of an era of rational culture. The want of present means induced the settler to accept it; the possession of accumulated savings enables him to reject it for a better.

The expression of the product of each grand division of the States at different periods in the form of a percentage of the whole crop will best illustrate the westward movement of production during thirty years.

	1849.	1859.	1869.	1879.
	Per cent.	*Per cent.*	*Per cent.*	*Per cent.*
Atlantic coast	51.4	30.7	20	12.8
Central belt	43.3	54.6	49	49.9
Trans-Mississippi	5.3	14.7	31	37.3
	100	100	100	100

The production of wheat in the five years past has been extraordinary. I make it an average of 425,000,000 bushels per annum. In the meantime the apparent consumption has averaged 233,000,000, the seed sown 51,000,000, and the average exportation in all forms 145,000,000. The distribution is apparently 20,000,000 bushels more than the production, coming from exhaustion of farmers' surplus and local stocks, during the past year of low production, representing the difference between the surplus of August 1, 1877, and that of August 1, 1882. On

this basis nearly 55 per cent. has been used for bread, almost 34 per cent. exported, and between 11 and 12 per cent. used for seed. In other words, one bushel has been sent abroad for two consumed at home.

One of the most valuable uses of statistics is found in the marketing of the products of the farm. Prices depend upon the relation of supply to demand; that relation cannot be known without the aid of statistics. In agriculture the margin between cost and selling price is usually small; so that lack of that knowledge which statistics may furnish not unfrequently destroys such margin and absorbs the profit of a season's labor.

Acting too literally upon the maxim to buy in the cheapest market and sell in the dearest, there are dealers in products of agriculture always ready to exaggerate crop prospects on the eve of harvest, before making contracts for purchase, and equally sanguine of an inadequate supply when in possession of all the stocks they can carry. Here is an evolution of which Darwin never dreamed: the bull of to-day was the bear of yesterday. It is the province of statistics to furnish the true basis of prices, for the benefit alike of producer and consumer, and of the honest dealer as well.

The wheat harvest of 1881 in the United States furnishes a striking illustration of the effect of statistics upon prices. Buyers were urging moderate views; the National and State reports showed a crop of less than 400,000,000 bushels, instead of 500,000,000; the growers advanced their rate, refusing to sacrifice the 5 to 10 cents difference per bushel. The value to growers of this information, at the moderate rate of 4 cents per bushel, on 250,000,000 bushels sold, would reach $10,000,000. It is probable that the publication of approximately accurate crop statistics, during the past year of comparative failure in the production of the United States, saved to the producers of cotton, wheat, corn, and other products at least $20,000,000, which otherwise would have gone into the pockets of the dealer and middleman, possibly without a dollar being saved to the consumer. The control of money, the facility for combination on the part of the buyer, places in his hands a great advantage over the isolated grower, who must be protected, if at all, by the government which claims his allegiance, his tribute, his service, and, if necessary, his life. Hence arises the necessity for State and National collection of statistics of agriculture.

Statistics serve also an important purpose in testing theories in political and industrial economy, tending to separate the true from the false, and laws of general from those of special application. By their aid we learn that policies in national economy applicable to one country are unsuited to another; that those practiced by one nation at a given period are and must be changed at another era characterized by radical change of circumstances. The popular notion, assumed to be founded on a law of commercial economy, that the price of a product at home is fixed by the price obtained in foreign countries for that portion of it

which is exported, is neither sustained by common sense nor by the facts of statistics. Just so far as such export enlarges the demand, it tends to increase the price; it is the law of supply and demand alone that governs, without reference to the source of such demand. Therefore, we find that the price of corn is little affected by exportation, because but 3 to 6 per cent. is exported. But the price of wheat is greatly influenced by exportation, because the foreign demand amounts to from 30 to 40 per cent. of the crop. On the contrary, the export is affected, controlled even, by the domestic price. In 1870 the quantity exported was only 2,000,000 bushels, because the price was above $1 per bushel; in 1880 it was 99,000,000 bushels, because the export price was less than 55 cents. While the greatest foreign demand is about 100,000,000 bushels, the difference in supply between an abundant product and a meager crop is 500,000,000. Thus the advance of last year, from an average farm value of 40 cents to 64 cents, is probably ten times as great as the effect upon price of the largest annual export ever made. This is 60 per cent., while the decrease in rate of yield was but 31 per cent. The excess in rise of price is abnormal, the result of panic, the effect of cornering and speculation generally. In the case of wheat, so great is the proportion exported, we find that a medium crop, with a diminished foreign demand, sometimes brings a very moderate price, while an excessive production, with an extraordinary demand abroad, has been attended with an actual rise of prices.

In the present era the products of the earth of all commercial countries are pooled for the traffic of the markets of the world, and prices are made by the relation between the aggregate supply and the aggregate demand, modified by the cost of transportation and circumstances affecting the ability to purchase of the peoples of the various nations. The fallacy that home prices are governed inexorably by whatever foreigners please to pay for our products, probably arose from the fact that where there is little home demand, as in the case of cotton before the extension of the factory system, the usual operation of the law of supply and demand would make the foreign price the home valuation, minus the cost of transportation, and possibly the tyranny of trade practiced upon local helplessness wherever the producing industry is new, and the avenues of commerce obscure. If we depend for consumption of our products upon foreign demand in large proportion, we, of course, must pay the expenses of shipment, and be subject to all the vicissitudes, chances and changes of foreign production, all of which join in constituting the demand in the supply of which we share.

In conclusion, allow me to say that there is indication of a great improvement, at the present time, in the methods and the spirit of statistical inquiry. A few years ago I took occasion to remark as follows:

> There is great activity of statistical inquiry at the present time, and but little patience of investigation; there is frequency and flippancy in statement, but less of accuracy and thoroughness. There is a feverish desire to accomplish the census of a

continent in one day, and proclaim its results the next. Few take time to weigh facts, sift error from truth, and reach broad and philosophical conclusions. What is wanted in statistics is more of thought and less of flurry, more industry and less precipitancy, sounder judgment and less zeal without knowledge. Few have yet learned the logic of statistics, and some even of our lawgivers are prone to build by proxy the frame-work of their political economy, and liable to give it a fantastic and incongruous finish.

There is awakened a broader, popular interest in the subject. The movements of trade are under the guidance of statistics. The enactment of law is preceded by statistical investigation. Ethical teaching is illustrated and enforced by an array of statistics. There is still too much of haste, carelessness of statement, illogical and unscientific treatment. There is still room for advance, for avoidance of crudity and empiricism, for increased accuracy, superior methods of investigation, higher culture, and a broader development in the art and science of statistics.

Table showing the condition of crops, &c., on the 1st day of September, 1882.

States and Territories.	Corn.	Wheat.	Rye.	Oats.	Barley.	Buckwheat.	Potatoes (Solanum tuberosum).	Potatoes (Batatas edulis), sweet.	Tobacco.	Cotton.	Sorghum.	Sugar-cane (not sorghum).	Apples.	Peaches.	Grapes.	Stock hogs. (Answer in hunddredths as with other questions.)	
	Average condition September 1.	Average condition when harvested.*	Average condition when harvested.*	Average condition when harvested.*	Average condition when harvested.*	Average condition September 1.	Average condition September 1.	Average condition September 1.	Average condition September 1.	Average condition September 1.	Average condition September 1.	Average condition September 1.	Average condition September 1.	Product compared with an average.	Average condition September 1.	Number for fattening compared with last year.	Average condition as to weight and size.
Maine	75	85	100	90	88	100	50	.....	.....	.....	.....	.....	60	.....	74	100	99
New Hampshire	62	100	100	96	94	96	65	.....	90	.....	.....	.....	82	.....	79	96	97
Vermont	85	107	106	109	104	99	88	.....	.....	.....	.....	.....	58	.....	78	97	97
Massachusetts	60	100	105	105	95	75	75	.....	75	.....	.....	.....	75	.....	80	100	100
Rhode Island	85	.....	100	100	90	90	85	.....	.....	.....	.....	.....	70	15	87	95	95
Connecticut	65	96	99	101	100	42	73	.....	73	.....	62	.....	61	.....	75	99	95
New York	77	101	100	106	101	83	78	.....	85	.....	63	.....	49	30	85	98	98
New Jersey	75	100	99	90	.....	60	89	95	100	.....	110	.....	62	70	88	90	99
Pennsylvania	86	104	104	90	95	100	97	93	86	.....	100	.....	49	55	90	95	98
Delaware	100	120	100	105	.....	100	98	90	.....	.....	100	.....	130	125	100	100	100
Maryland	103	110	108	85	107	102	99	101	92	.....	103	.....	70	95	100	97	98
Virginia	98	109	103	62	.....	104	97	98	93	90	95	.....	65	47	94	87	92
North Carolina	107	110	99	119	101	100	110	101	108	88	99	.....	94	105	96	95	97
South Carolina	111	107	103	128	99	.....	103	105	.....	95	103	.....	95	106	99	99	99
Georgia	115	106	98	117	105	.....	103	107	104	89	102	105	60	68	91	96	102
Florida	107	.....	.....	90	.....	.....	97	106	101	83	101	103	99	50	90	105	100
Alabama	117	103	98	117	101	.....	107	110	103	90	101	110	75	87	105	90	95
Mississippi	110	104	101	109	.....	.....	108	110	103	86	105	107	100	110	100	81	95
Louisiana	101	.....	.....	98	.....	.....	101	108	88	89	97	107	75	81	90	90	92
Texas	102	92	99	96	.....	.....	104	106	105	101	104	100	100	107	103	95	97
Arkansas	113	106	107	114	.....	.....	106	108	105	100	105	102	100	106	103	78	90
Tennessee	120	112	102	83	104	93	113	105	102	89	105	.....	85	79	87	80	95
West Virginia	89	95	95	66	.....	107	102	99	98	.....	91	.....	44	42	83	90	95
Kentucky	108	120	107	100	100	101	106	100	89	.....	.....	.....	65	70	72	75	90
Ohio	74	96	88	87	77	100	105	89	65	.....	74	.....	31	32	74	71	84
Michigan	88	97	101	104	104	100	107	.....	.....	.....	98	.....	61	66	93	95	99
Indiana	78	102	98	98	97	100	107	93	97	.....	94	.....	51	60	75	82	90
Illinois	56	103	95	104	92	101	104	95	92	.....	84	.....	64	71	76	71	84
Wisconsin	79	95	99	104	96	93	91	.....	87	.....	78	.....	76	.....	80	92	91
Minnesota	83	102	101	108	103	98	102	.....	.....	.....	79	.....	80	.....	88	104	94
Iowa	70	86	99	96	94	97	105	98	.....	.....	77	.....	50	.....	80	78	80
Missouri	91	110	101	107	103	100	107	100	93	.....	98	.....	95	100	70	90	88

Table showing the condition of crops, &c., on the 1st day of September, 1882—Continued.

States and Territories.	Corn. Average condition September 1.	Wheat. Average condition when harvested.*	Rye. Average condition when harvested.*	Oats. Average condition when harvested.*	Barley. Average condition when harvested.*	Buckwheat. Average condition September 1.	Potatoes (Solanum tuberosum). Average condition September 1.	Potatoes (Batatas edulis), sweet. Average condition September 1.	Tobacco. Average condition September 1.	Cotton. Average condition September 1.	Sorghum. Average condition September 1.	Sugar-cane (not sorghum). Average condition September 1.	Apples. Average condition September 1.	Peaches. Product compared with an average.	Grapes. Average condition September 1.	Stock hogs. (Answer in hundredths as with other questions.) Number for fattening compared with last year.	Stock hogs. (Answer in hundredths as with other questions.) Average condition as to weight and size.
Kansas	104	112	106	107	100	99	95	95	88	.....	94	.....	108	96	95	80	90
Nebraska	102	100	107	112	104	87	114	105	.....	.....	95	.....	100	105	98	97	89
California	90	85	90	.....	100	.....	100	100	.....	.....	.....	.....	100	90	95	.....	.....
Oregon	90	103	92	100	97	97	94	.....	.....	.....	100	.....	191	69	104	99	100
Nevada	100	106	100	110	100	.....	98	.....	.....	.....	.....	.....	80	75	.....	100	100
Colorado	98	95	93	107	97	100	110	.....	.....	.....	92	.....	80	.....	100	96	104
Utah	99	87	.....	98	89	.....	85	.....	.....	.....	86	.....	87	68	89	99	101
New Mexico	96	91	.....	100	.....	.....	110	.....	.....	.....	.....	.....	93	78	100	90	87
Washington	93	93	97	95	93	.....	96	.....	.....	.....	.....	.....	97	80	93	104	99
Dakota	87	108	100	106	102	93	107	.....	100	.....	88	.....	.....	.....	.....	153	93
Montana	95	103	.....	100	105	.....	96	.....	.....	.....	.....	.....	.....	.....	.....	105	100
Idaho	100	93	.....	102	93	.....	105	.....	.....	.....	.....	.....	100	.....	.....	.....	.....
Arizona	100	104	.....	.....	105	.....	.....	100	.....	.....	.....	.....	.....	100	105	105	105
Wyoming	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....	.....
Indian	105	110	.....	112	.....	.....	110	95	.....	89	90	.....	90	103	.....	75	80

*For wheat, rye, oats, and barley, 100 stands for a perfectly developed and healthy growth.

FREIGHT RATES—RAILROAD COMPANIES.

BALTIMORE AND OHIO RAILROAD.

Articles.	Chicago to—			East Saint Louis to—			Cincinnati to—			Baltimore to—				Baltimore from—			
	New York.	Baltimore.	Washington.	New York.	Baltimore.	Washington.	New York.	Baltimore.	Washington.	Milford Junction.	Newark.	Bellaire.	Cumberland.	Milford Junction.	Newark.	Bellaire.	Cumberland.
Flour (C. L.) ..... per bbl..	$0 50	$0 44	$0 44	$0 58	$0 52	$0 52	$0 43	$0 37	$0 37	$0 54	$0 42	$0 30	$0 40	$0 41	$0 31	$0 24	$0 40
Wheat (C. L.) ..... per 100 lbs..	25	22	22	29	26	26	21½	18½	18½	27	21	15	20	20½	15½	12	20
Corn (C. L.) ..... do....	25	22	22	29	26	26	21½	18½	18½	27	21	15	20	20½	15½	12	20
Rye (C. L.) ..... do....	25	22	22	29	26	26	21½	18½	18½	27	21	15	20	20½	15½	12	20
Barley (C. L.) ..... do....	25	22	22	29	26	26	21½	18½	18½	27	21	15	20	20½	15½	12	20
Oats (C. L.) ..... do....	25	22	22	29	26	26	21½	18½	18½	27	21	15	20	20½	15½	12	20
Pork (C. L.) ..... do....	30	27	27	35	32	32	26	23	23	27	21	15	20	25½	19	15	26
Beef (C. L.) ..... do....	30	27	27	35	32	32	26	23	23	*52	*40	*32	*36	*58	*44	*20	*55
Lard (C. L.) ..... do....	30	27	27	35	32	32	26	23	23	27	21	15	21	25½	19	15	26
Horses (C. L.) ..... do....	60	57	57	65	62	62	52	49	49	52	40	32	22	54	41½	27	22
Mules (C. L.) ..... do ..	60	57	57	65	62	62	52	49	49	52	40	32	22	54	41½	27	22
Cattle (C. L.) ..... do....	40	37	37	46½	43½	43½	35	32	32	52	40	32	22	35	26½	17	22
Sheep (C. L.) ..... do....	50	47	47	58	55	55	43½	40½	40½	52	40	32	22	44½	34	24½	22
Live hogs (C. L.) ..... do....	30	27	27	35	32	32	26	23	23								
Dressed hogs (C. L.) ..... do....	64	61	61	75	72	72	55½	52½	52½	†52	†40	†32	†36	†58	†44	†20	†55
Lumber (C. L.) ..... do....	30	27	27	35	32	32	26	23	23	27	21	15	17½	25½	19	17½	17½
Shingles (C. L.) ..... do....	30	27	27	35	32	32	26	23	23	27	21	15	17½	25½	19	17½	17½
Laths (C. L.) ..... do....	30	27	27	35	32	32	26	23	23	27	21	15	17½	25½	19	17½	17½
Hoop-poles (C. L.) ..... do....	30	27	27	35	32	32	26	23	23								
Wool (C. L.) ..... do....	85	82	82	98½	95½	95½	74	71	71	78	60	48	55	77½	60	49½	45
Tobacco (C. L.) ..... do....	31½	28½	28½	36½	33½	33½	25	22	22	‡37	‡29	‡23	‡26		‡40	‡35	‡26
Salt (C. L.) ..... do ..	30	27	27	35	32	32	26	23	23	27	21	15	17½	25½	19	17	17½
Hay (C. L.) ..... do ..	25	22	22	29	26	26	21½	18½	18½								
Peaches ..... do....										1 04	80	64	55	92	71	61	55
Apples (C. L.) (140 bbls.) ... do....										37	29	23	Bbl., 40	Bbl., 41	Bbl., 31	Bbl.*, 24	Bbl., 40
Plums ..... do....										52	40	15	55	92	71	61	55
Watermelons ..... do....										52	40	15	55	92	71	61	55
Cantaloupes ..... do....										52	40	15	55	92	71	61	55
Pears ..... do....										52	40	15	55	92	71	61	55

* Dressed per 100 lbs. † Per 100 lbs. ‡ Leaf.

NOTE.—Minimum weight of live stock *to* Baltimore: Sheep (D. D.), 18,000 pounds; (S. D.), 14,000 pounds. Horses, cattle, 20,000 pounds per car. Hogs (D. D.), 22,000 pounds; (S. D.) 16,000 pounds. Minimum weight of live stock *from* Baltimore, 16,000 pounds.
C. L.—Car-load.

FREIGHT RATES—RAILROAD COMPANIES.

PENNSYLVANIA RAILROAD COMPANY.

Articles.	Boston to—				New York to—				Philadelphia to—				Baltimore to—				Washington to—			
	Chicago.	East Saint Louis.	Indianapolis.	Cincinnati.	Chicago.	East Saint Louis.	Indianapolis.	Cincinnati.	Chicago.	East Saint Louis.	Indianapolis.	Cincinnati.	Chicago.	East Saint Louis.	Indianapolis.	Cincinnati.	Chicago.	East Saint Louis.	Indianapolis.	Cincinnati.
Flour ..... per 100 lbs	$0 30	$0 36	$0 28	$0 28	$0 30	$0 36	$0 28	$0 28	$0 28	$0 34	$0 26	$0 26	$0 27	$0 33	$0 25	$0 25	$0 27	$0 33	$0 25	$0 25
Wheat ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Corn ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Rye ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Barley ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Oats ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Pork ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Beef ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Lard ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Horses (C. L.) ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Mules (C. L.) ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Cattle (C. L.) ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Sheep (C. L.) ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Live hogs (C. L.) ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Dressed hogs (C. L.) ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Lumber ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Shingles ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Laths ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Hoop-poles ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Wool, domestic ..... do	90	1 06⅓	85⅓	82⅔	90	1 06⅓	85⅓	82⅔	81	97⅞	76½	73⅓	78	89½	73⅓	70½	78	89½	73⅓	70½
Tobacco, leaf ..... do	40	48	38	37	40	48	38	37	38	46	36	35	37	45	35	34	37	45	35	34
Salt ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Hay (C. L.) ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Coal, anthracite ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Coal, bituminous ..... do	30	36	28	28	30	36	28	28	28	34	26	26	27	33	25	25	27	33	25	25
Peaches ..... per crate	30	36	28	28	30	36	28	28	28	34	26	26								
Apples ..... per 100 lbs	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Plums ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Pears ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Watermelons ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Cantaloupes ..... do	60	71	57	55	60	71	57	55	54	65	51	49	52	63	49	47	52	63	49	47
Cotton (square bales) ..... do	40	48	38	37	40	48	38	37	38	46	36	35	37	45	35	34	37	45	35	34

C. L.—Car-load.

FREIGHT RATES—RAILROAD COMPANIES.

PENNSYLVANIA RAILROAD COMPANY.

Articles.	Chicago to—					East Saint Louis to—					Indianapolis to—					Cincinnati to—				
	Boston.	New York.	Philadelphia.	Baltimore.	Washington.	Boston.	New York.	Philadelphia.	Baltimore.	Washington.	Boston.	New York.	Philadelphia.	Baltimore.	Washington.	Boston.	New York.	Philadelphia.	Baltimore.	Washington.
Flour (C. L. 125 barrels) ..... per bbl..	$0 60	$0 50	$0 46	$0 44	$0 44	$0 68	$0 58	$0 54	$0 52	$0 52	$0 56	$0 46	$0 42	$0 40	$0 40	$0 53	$0 43	$0 39	$0 37	$0 37
Wheat (C. L. 24,000 pounds) ..... per 100 lbs..	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Corn (C. L. 24,000 pounds) ..... do....	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Rye (C. L. 24,000 pounds) ..... do....	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Barley (C. L. 24,000 pounds) ..... do....	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Oats (C. L. 24,000 pounds) ..... do....	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Pork, pickled ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	25	31	26	24	23	23
Beef ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	.....	31	26	24	23	23
Lard ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	.....	31	26	24	23	23
Horses (C. L.) ..... do....	60	60	58	57	57	65	65	63	62	62	56	56	54	53	53	52	52	50	49	49
Mules (C. L.) ..... do....	60	60	58	57	57	65	65	63	62	62	56	56	54	53	53	52	52	50	49	49
Cattle (C. L.) ..... do....	60	60	58	57	57	65	65	63	62	62	56	56	54	53	53	52	52	50	49	49
Sheep (C. L.) ..... do....	60	60	58	57	57	65	65	63	62	62	56	56	54	53	53	52	52	50	49	49
Live hogs (C. L.) ..... do....	30	30	28	27	27	35	35	33	32	32	28	28	26	25	25	26	26	24	23	23
Dressed hogs* ..... do....	64	64	62	61	61	74	74	72	72	72	59½	59½	57½	56½	56½	55½	55½	53½	52½	52½
Lumber (C. L.) ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	25	31	26	24	23	23
Shingles (C. L.) ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	25	31	26	24	23	23
Laths (C. L.) ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	25	31	26	24	23	23
Hoop-poles (C. L.) ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	25	31	26	24	23	23
Wool ..... do....	95	85	83	82	82	1 08½	98½	96½	95½	95½	89	79	77	76	76	84	74	72	71	71
Tobacco, unmanufactured ..... do....	36½	31½	29½	28½	28½	41½	36½	34½	33½	33½	34½	29½	27½	26½	26½	30	25	23	22	22
Salt (C. L.) ..... do....	35	30	28	27	27	40	35	33	32	32	33	28	26	25	25	31	26	24	23	23
Hay, pressed in bales (C. L.) ..... do....	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Coal, anthracite ..... do....	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Coal, bituminous ..... do....	30	25	23	22	22	34	29	27	26	26	28	23	21	20	20	26½	21½	19½	18½	18½
Peaches, green (O. R. P. P.) ..... do....	1 10	1 00	98	97	97	1 26	1 16	1 14	1 13	1 13	1 03	93	91	90	90	97	87	85	84	84
Apples (C. L. 140 barrels) ..... per bbl..	60	50	46	44	44	68	58	54	52	52	56	46	42	40	40	53	43	39	37	37
Plums (O. R. P. P.) ..... per 100 lbs..	1 10	1 00	98	97	97	1 26	1 16	1 14	1 13	1 13	1 03	93	91	90	90	97	87	85	84	84
Pears (O. R. P. P.) ..... do....	1 10	1 00	98	97	97	1 26	1 16	1 14	1 13	1 13	1 03	93	91	90	90	97	87	85	84	84
Watermelons (O. R. P. P.) ..... do....	1 10	1 00	98	97	97	1 26	1 16	1 14	1 13	1 13	1 03	93	91	90	90	97	87	85	84	84
Cantaloupes (O. R. P. P.) ..... do....	1 10	1 00	98	97	97	1 26	1 16	1 14	1 13	1 13	1 03	93	91	90	90	97	87	85	84	84
Cotton (compressed) ..... do....	.....	.....	.....	.....	.....	35	30	28	27	27	.....	.....	.....	.....	.....	32	27	25	24	24

*Dressed hogs in refrigerator cars, O. R., 5 cents higher.

NOTE.—Rates on live stock to New York City only cover delivery at Jersey City. C. L.—Car-load. O. R. P. P.—Owners' risk, prepaid.

FREIGHT RATES—RAILROAD COMPANIES.

NEW YORK, LAKE ERIE AND WESTERN RAILROAD.

Articles.	Chicago to New York.	Milwaukee to New York.	East Saint Louis to New York.	Detroit to New York.	Toledo to New York.	Cleveland to New York.	Mansfield to New York.	Dunkirk to New York.	Buffalo to New York.	Elmira to New York.	Philadelphia to— Elmira.	Buffalo.	Dunkirk.	Mansfield.	Philadelphia from— Elmira.	Buffalo.	Dunkirk.	Mansfield.
Flour ..... per 100 lbs.	$0 25	$0 25	$0 29	$0 19	$0 19	$0 17½	Bbl. $0 37	Bbl. $0 30	Bbl. $0 30	Bbl. $0 26	$0 17	$0 17	$0 17	$0 20	$0 13	$0 15	$0 15	$0 16½
Wheat .....do....	25	25	29	19	19	17½	18½	15	15	13	17	17	17	20	13	15	15	16½
Corn .....do....	25	25	29	19	19	17½	18½	15	15	13	17	17	17	20	13	15	15	16½
Rye .....do....	25	25	29	19	19	17½	18½	15	15	13	17	17	17	20	13	15	15	16½
Barley.....do....	25	25	29	19	19	17½	18½	15	15	13	17	17	17	20	13	15	15	16½
Oats.....do....	25	25	29	19	19	17½	18½	15	15	13	17	17	17	20	13	15	15	16½
Pork, in barrels ....do....	30	30	35	22½	22½	21	22½	17½	17½	15	17	17	17	20	15	17½	17½	20½
Beef, in barrels.....do....	30	30	35	22½	22½	21	22½	17½	17½	15	17	17	17	20	15	17½	17½	20½
Lard .....do....	30	30	35	22½	22½	21	22½	17½	17½	15	17	17	17	20	15	17½	17½	20½
Horses .....do....	60	60	65	*45 30	*45 30	42	45	30	30	27½	17	35	35	38	27½	28	28	43
Mules .....do....	60	60	60	*45 30	*45 30	42	45	30	30	27½	17	35	35	38	27½	28	28	43
Cattle.....per 100 lbs net..	40	50	45	*30 30	*30 30	28	37½	30	30	25	17	35	35	38	25	28	28	43
Sheep .....do....	50	50	55	*37 50	*37 50	29½	45	32½	32½	27½	17	35	35	38	27½	30½	30½	43
Live hogs.... per 100 lbs..	30	30	35	*22 65	*22 65	21					17	35	35	38	27½	15½	15½	20½
Dressed hogs.....do....	64	64	69	48½	48½	45	36	28½	28½	44	17	17	17	20	15	17½	17½	20½
Lumber .....do....	30	30	35	22½	22½	21	22½	15	15	15	17	17	17	20	15	15	15	20½
Shingles.....do....	30	30	35	22½	22½	21	22½	15	15	15	17	17	17	20	15	15	15	20½
Laths .....do....	30	30	35	22½	22½	21	22½	15	15	15	17	17	17	20	15	15	15	20½
Hoop-poles .....do....	30	30	35	22½	22½	21					17	17	17	20	15	15	15	20½
Wool .....do....	85	85	98½	64	64	60	63½	42½	42½	37½	(†)	(†)	(†)	(‡)	37½	42½	42½	61½
Cotton .....do....							30	19	19	19								
Tobacco .....do....	31½	31½	36½	24	24	22	24	15¾	15¾	22½	25	25	25	27	22½	15¾	15¾	22
Salt .....do....	30	30	35	22½	22½	21	22½	15	15	15	17	17	17	20	15	15	15	20½
Hay .....do....	25	25	29	19	19	17½					17	17	17	20	15	15	15	16½
Vegetables .....do....	30	30	35	22½	22½	21												
Potatoes .....do....	30	30	35	22½	22½	21					17	17	17	20	15	17½	17½	20½
Apples.....per bbl..							37	30	30	30	§35	§35	§35	§38	30	30	30	33
Peaches.....per 100 lbs..							75	50	50	45								
Plums.....do....							75	50	50	45								
Watermelons.....do....							C. L ... 33½	22½	22½	45								
Cantaloupes .....do....							L. C. L. 75	50	50	45								
Pears.....do....							75	50	50	45								

*Per car. †Pressed, 25; not pressed, 45. ‡Pressed, 27; not pressed, 57. §Per 100 pounds.

NOTE.—Rates *to* and *from* Philadelphia are per car-load. Rates on live stock from Detroit and Toledo per car-load. C. L.—Car-load. L. C. L.—Less than car-load.

WABASH, SAINT LOUIS AND PACIFIC RAILWAY COMPANY.

Articles.	East Burlington to—							East Keokuk to—						
	Worcester, Bridgeport, New Haven, Providence, Boston, Portland, Hartford.	Newport.	Philadelphia.	Baltimore.	Schenectady, Troy, Albany.	Montreal, Kingston, Brockville, Prescott.	Bellaire, Wheeling, Pittsburgh, Buffalo, Suspension Bridge, Erie, Dunkirk.	Worcester, Bridgeport, New Haven, Hartford, Providence, Boston, Portland.	New York.	Philadelphia.	Baltimore.	Schenectady, Troy, Albany.	Montreal, Kingston, Brockville, Prescott.	Bellaire, Wheeling, Pittsburg, Buffalo, Suspension Bridge, Erie, Dunkirk.
Flour, 125 barrels and over ..... per bbl.	$0 68	$0 58	$0 54	$0 52	$0 56	$0 56	$0 34	$0 60	$0 58	$0 54	$0 52	$0 56	$0 56	$0 34
Flour, less than 125 barrels ..... do	80	70	66	64	60	60	40	80	70	66	64	60	60	40
Grain, barrels or sacks (L. C. L.) ..... per 100 lbs.	40	35	33	32	30	30	20	40	35	33	32	30	30	20
*Grain, bulk (C. L.) ..... do	34	29	27	26	28	28	17	30	29	27	26	28	28	17
†Grain, bulk ..... do	40	35	33	32	30	30	20	40	35	33	32	30	30	20
Beef, dressed ..... do ..	74	74	72	71	69	69	40	74	74	72	71	69	69	40
Beef, barrels or tierces ..... do ..	40	35	33	32	30	30	20	40	35	33	32	30	30	20
Pork, pickled, barrels ..... do ..	40	35	33	32	30	30	20	40	35	33	32	30	30	20
Lard ..... do ..	40	35	33	32	30	30	20	40	35	33	32	30	30	20
Lumber, logs, timber, not over 27 feet long (C.L.) .... do	40	35	33	32	32	32	20	40	35	33	32	32	32	20
Lumber, logs, timber, not over 27 feet long (L.C.L.) .. do	57	52	50	49	47	47	28	57	52	50	49	47	47	28
Shingles and lath (C. L.) ..... do	40	35	33	32	32	32	20	40	35	33	32	32	32	20
Shingles and lath (L. C. L.) ..... do	57	52	50	49	47	47	28	57	52	50	49	47	47	28
Wool ..... do ..	1 08½	98½	96½	95½	88½	88½	55	1 08½	98½	96½	95½	88½	88½	55
Salt (C. L.) ..... do	40	35	33	32	32	32	20	40	35	33	32	32	32	20
Salt, table, boxes, or bags ..... do	57	52	50	49	47	47	28	57	52	50	49	47	47	28
Salt, common, in barrels (L. C. L.) ..... do	57	52	50	49	47	47	28	57	52	50	49	47	47	28
Fruits, green (N. O. S.) ..... do	1 26	1 16	1 14	1 13	1 06	1 06	63	1 26	1 16	1 14	1 13	1 06	1 06	63
Fruits, dried (C. L.) ..... do	57	52	50	49	47	47	28	57	52	50	49	47	47	28
Fruits, dried (L. C. L.) ..... do	74½	69½	67½	66½	64½	64½	37½	74½	69½	67½	66½	64½	64½	37½
Peaches, green (O. R.), prepaid ..... do	1 26	1 16	1 14	1 13	1 06	1 06	63	1 26	1 16	1 14	1 13	1 06	1 06	63
Apples, green (C. L. of 140 barrels) ..... do	68	58	54	52	56	56	30	60	58	54	52	56	56	34
Apples, green (L. C. L.) ..... do	80	70	66	64	60	60	40	80	70	66	64	60	60	40
Hay (C. L.), pressed in bales ..... do	34	29	27	26	28	28	17	86	81	79	78	76	76	45
Hay (L. C. L.), pressed in bales ..... do	86	81	79	78	76	76	45	30	29	27	26	28	28	17
Coal (C. L.) ..... do ..	34	29	27	26	28	28	17	30	29	27	26	28	28	17

C. L.—Car-load L. C. L.—Less than car-load. N. O. S.—Not otherwise specified. O. R.—Owner's risk.
Minimum weight 24,000 pounds per car load. † Less than 24,000 pounds and more than 15,000 pounds.

FREIGHT RATES—RAILROAD COMPANIES.

Articles.	ILLINOIS CENTRAL RAILROAD.		GRAND TRUNK RAILWAY.							
	Chicago to—		Portland to—		Boston to—		Chicago to—		Detroit to—	
	Mobile.	New Orleans.	Chicago.	Detroit.	Chicago.	Detroit.	Portland.	Boston.	Portland.	Boston.
Flour.....per bbl..	$0 80	$0 80	$0 52	$0 34	$0 60	$0 42	$0 60	$0 60	$0 48	$ 048
Wheat.....per 100 lbs..	38	38	26	17	30	21	30	30	24	24
Corn .....do....	38	38	26	17	30	21	30	30	24	24
Rye .....do....	38	38	26	17	30	21	30	30	24	24
Barley .....do....	38	38	26	17	30	21	30	30	24	24
Oats.....do ..	38	38	26	17	30	21	30	30	24	24
Pork.....per bbl..	1 15	1 15	26	17	30	21	35	35	27½	27½
Beef.....do....	1 15	1 15	26	17	30	21	35	35	27½	27½
Lard .....per 100 lbs.	40	40	26	17	30	21	35	35	27½	27½
Horses (C. L.) .....do....	1 15	1 15	(C. L.) 80 00	(C. L.) 51 20	(C. L.) 96 00	(C. L.) 67 20	(C. L.) 120 00	(C. L.) 120 00	(C. L.) 90 60	(C. L.) 90 60
Mules (C. L.) .....do....	1 15	1 15	(C. L.) 80 00	(C. L.) 51 20	(C. L.) 96 00	(C. L.) 67 20	(C. L.) 120 00	(C. L.) 120 00	(C. L.) 90 60	(C. L.) 90 60
Cattle (C. L.) .....do....	1 15	1 15	.....	.....	.....	.....	(C. L.) 114 00	(C. L.) 114 00	(C. L.) 71 73	(C. L.) 71 73
Sheep (C. L.) .....do....	1 15	1 15	.....	.....	.....	.....	{ C. L. / D.D. } 108 00	{ C. L. / D.D. } 108 00	{ C. L. / D.D. } 81 54	{ C. L. / D.D. } 81 54
Live hogs (C. L.)...do....	1 15	1 15	.....	.....	.....	.....	{ C. L. / D.D. } 66 00	{ C. L. / D.D. } 66 00	{ C. L. / D.D. } 45 30	{ C. L. / D.D. } 45 30
Dressed hogs.....do....	.....	.....	.....	.....	.....	.....	64	64	54	54
Lumber .....do....	(C. L.) 40	(C. L.) 40	26	17	30	21	35	35	27½	27½
Lumber .....do....	(L. C. L.) 52	(L. C. L.) 52	.....	.....	.....	.....	.....	.....	.....	.....
Shingles.....do....	(C. L.) 40	(C. L.) 40	26	17	30	21	35	35	27½	27½
Shingles.....do....	(L. C. L.) 52	(L. C. L.) 52	.....	.....	.....	.....	.....	.....	.....	.....
Laths .....do....	(C. L.) 40	(C. L.) 40	26	17	30	21	35	35	27½	27½
Laths .....do....	(L. C. L.) 52	(L. C. L.) 52	.....	.....	.....	.....	.....	.....	.....	.....
Hoop-poles .....do....	(C. L.) 45	(C. L.) 45	26	17	30	21	35	35	27½	27½
Hoop-poles .....do....	(L. C. L.) 45	(L. C. L.) 45	.....	.....	.....	.....	.....	.....	.....	.....
Wool.....do....	*75	*75	,75	48	90	63	95	95	74	74
Tobacco, unmanufactured .....per 100 lbs..	.....	40	34	22	40	28	36½	36½	29	29
Salt .....do....	(L. C. L.) †45	(L. C. L.) †45	26	17	30	21	35	35	27½	27½
Hay .....do....	(C. L.) 38	(C. L.) 38	.....	.....	.....	.....	30	30	24	24
Fruit, green.... ..do....	75	75	.....	.....	.....	.....	.....	.....	.....	.....
Fruit, dried .... ..do....	75	75	.....	.....	.....	.....	.....	.....	.....	.....
Vegetables .....do....	75	75	.....	.....	.....	.....	.....	.....	.....	.....

*Pressed bales.

†In sacks.

NOTE.—Illinois Central Railroad, special rates for live stock when released.

D. D.—Double-deck. C. L.—Car-load. L. C. L.—Less than car-load.

FREIGHT RATES—RAILROAD COMPANIES.

Articles.	WILMINGTON AND WELDON RAILROAD.								NORTHEASTERN RAILROAD.							
	Wilmington to—				Wilmington from—				Charleston to—				Charleston from			
	Baltimore.	Philadelphia.	New York.	Boston.	Baltimore.	Philadelphia.	New York.	Boston.	Baltimore.	Philadelphia.	New York.	Boston.	Baltimore.	Philadelphia.	New York.	Boston.
Flour.....per bbl..	$0 32	$0 32	$0 32	$0 42	$0 32	$0 32	$0 32	$0 42	$0 60	$0 60	$0 60	$0 60	$0 60	$0 60	$0 60	$0 60
Wheat.....per 100 pounds..	17	17	17	22	17	17	17	22	30	30	30	30	30	30	30	30
Corn.....do....	17	17	17	22	17	17	17	22	30	30	30	30	30	30	30	30
Rye.....do ..	17	17	17	22	17	17	17	22	30	30	30	30	30	30	30	30
Barley.....do....	17	17	17	22	17	17	17	22	30	30	30	30	30	30	30	30
Oats.....do....	17	17	17	22	17	17	17	22	30	30	30	30	30	30	30	30
Pork.....per bbl..	50	50	50	66	50	50	50	66	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Beef.....do	50	50	50	66	50	50	50	66	1 00	1 00	1 00	1 00	1 00	1 00	1 00	1 00
Lard (released).....per 100 lbs..	17	17	17	22	17	17	17	22	30	30	30	30	30	30	30	30
Lard (not released).....do....	32	32	32	37	32	32	32	37	55	55	55	55	55	55	55	55
Cotton.....per bale..	1 75	1 90	1 90	2 75	1 75	1 90	1 90	2 75	.....	.....	.....	.....	.....	.....	.....	.....
Fish, salt.....per 100 lbs..	18	18	18	23	18	18	18	23	35	35	35	35	35	35	35	35
Wool, in bags.....do....	62	62	62	67	62	62	62	67	70	70	70	70	70	70	70	70
Wool, in bales.....do....	38	38	38	43	38	38	38	43	57	57	57	57	57	57	57	57
Salt.....do....	18	18	18	23	18	18	18	23	35	35	35	35	35	35	35	35
Watermelons.....per 100..	.....	.....	.....	.....	.....	.....	.....	.....	45	50	50	50	45	50	50	50
Cantaloupes.....do....	.....	.....	.....	.....	.....	.....	.....	.....	45	50	50	50	45	50	50	50

Articles.	MOBILE AND OHIO RAILROAD.				
	Mobile to—		Meridian to Mobile.	Corinth to Mobile.	Columbus, Ky., to Mobile.
	Saint Louis.	Chicago.			
Flour (in bbls.) per 100 lbs	$0 32½	$0 45	$0 25	$0 25	$0 25
Flour (in sacks) do	35	45			
Wheat do	27	42	25	25	25
Corn do	27	42	25	25	25
Rye do	27	42	25	25	25
Barley do	27	42	25	25	25
Oats do	27	42	25	25	25
Pork per bbl	1 15	1 30	66	(C. L.) per 100 lbs 40	(C. L.) per 100 lbs 40
Beef do	1 15	1 30	66	(C. L.) per 100 lbs 40	(C. L.) per 100 lbs 40
Lard per 100 lbs	37	42	(In bbls.) 20	(C. L.) per 100 lbs 50	(C. L.) per 100 lbs 56
Live stock (D. D.) car load			60 00	85 00	100 00
Horses (S. D.) do			40 00	70 00	80 00
Mules (S. D.) do			40 00	70 00	80 00
Cattle (S. D.) do			40 00	70 00	80 00
Sheep (S. D.) do			30 00	60 00	70 00
Live hogs (S. D.) do			30 00	60 00	70 00
Lumber per 100 lbs	37	42	(C. L.) 11	(C. L.) 18	(C. L.) 18
Shingles do	37	42	(C. L.) 11	(C. L.) 18	(C. L.) 18
Laths do	37	42	(C. L.) 11	(C. L.) 18	(C. L.) 18
Hoop-poles do	37	42			
Wool do	65	75	(In bales) 50	(In bales) 60	(In bales) 67
Cotton per bale	2 00	3 50	1 50		
Tobacco per 100 lbs	42	55	In hhds.) 30	(In hhds.) 80	(In hhds) 1 00
Salt per bbl	45		(In bbls. per 100) 20	(In bbls. per 100) 40	(In bbls. per 100) 40
Hay per ton	27	42			
Peaches per 100 lbs			(In crates) 45	(In crates) 45	(In crates) 45
Apples do			(In bbls.) 45	(In bbls.) 45	(In bbls.) 45
Plums do			(In boxes) 45	(In boxes) 45	(In boxes) 45
Watermelons do			45	45	45
Cantaloupes do			45	45	45
Pears do			(In bbls.) 45	(In bbls.) 45	(In bbls.) 45
Pears do			(In boxes) 45	(In boxes) 45	(In boxes) 45

S. D.—Single-deck. D. D.—Double-deck. C. L.—Car-load.

FREIGHT RATES—RAILROAD COMPANIES.

THE SOUTHERN RAILWAY AND STEAMSHIP ASSOCIATION.

Rates of freight taking effect at shipping point on the 1st day of September, 1882.

Articles.	TO CHATTANOOGA, TENN., FROM—												
	Boston, New York, Philadelphia.	Baltimore.	Norfolk, Portsmouth, Petersburg, Richmond.	Wilmington.	Charleston, Port Royal, Savannah, Brunswick.	Chicago.	Peoria, Pekin, Havana.	Saint Louis (storedoor); East Saint Louis.	Cincinnati.	Louisville, Jeffersonville, Evansville, Cairo, East Cairo, Henderson.	Columbus, Hickman.	Memphis depot.	Nashville.
Apples, green, in barrels.....per 100 lbs..	$0 86	$0 81	$0 66	$0 61	$0 58	$0 92	$0 88	$0 84	$0 62	$0 62	$0 60	$0 57	$0 37
Apples, dried.....do....	73	68	54	51	48	72	69	66	52	52	50	47	30
Bacon, loose (L. C. L.).....do....	1 18	1 11	90	85	80	1 34	1 27	1 19	84	84	82	79	49
Bacon, loose (C. L.) .....do....	86	81	66	61	58	92	88	84	62	62	60	57	37
Bacon, packed in wood .....do....	53	50	37	35	33	47	45	43	33	33	31	28	25
Bacon, in bags.....do....	86	81	66	61	58	92	88	84	62	62	60	57	37
Beans, in boxes.....do....	1 01	95	82	77	73	1 12	1 07	1 02	72	72	70	67	42
Beans, in barrels.....do....	60	56	43	40	38	59	57	55	42	42	40	37	24
Beef, smoked, in boxes or barrels.....do....	86	81	66	61	58	92	88	84	62	62	60	57	37
Beef and pork, salted, in barrels .....per bbl..	1 59	1 50	1 11	1 05	99	1 41	1 35	1 29	99	99	93	84	75
Butter, in kegs, tubs, and firkins ..per 100 lbs..	1 01	95	82	77	73	1 12	1 07	1 02	72	72	70	67	42
Cabbages, packed .....do	86	81	66	61	58	92	88	84	62	62	60	57	37
Cheese .....do....	73	68	54	51	48	72	69	66	52	52	50	47	30
Dried fruit (N. O. S.).....do....	86	81	66	61	58	92	88	84	62	62	60	57	37
Eggs, packed.....do....	1 18	1 11	90	85	80	1 34	1 27	1 19	84	84	82	79	49
Flour, in barrels.....per bbl..	78	72	47	44	40	69	65	61	47	47	43	37	33
Flour, in sacks.....per 100 lbs..	40	37	25	22	20	36	34	32	24	24	22	19	16
Grain.....do....	39	36	23	21	19	34	32	30	23	23	21	18	16
Hay, pressed, in bales (L. C. L.).....do....	60	56	43	40	38	59	57	55	42	42	40	37	24
Hay, pressed, in bales (C. L. or over).....do....	39	36	23	21	19	34	32	30	23	23	21	18	16
Hoop-poles .....do....	49	46	38	35	33	48	46	44	33	33	31	28	25
Hops, baled .....do....	1 01	95	82	77	73	1 12	1 07	1 02	72	72	70	67	42
Lard .....do....	73	68	54	51	48	72	69	66	52	52	50	47	30
Live stock (C. L) .....do....	1 18	1 11	90	85	80	1 34	1 27	1 19	84	84	82	79	49
Lumber, dressed (L. C. L.).....do....	86	81	66	61	58	92	88	84	62	62	60	57	37
Lumber, dressed (C. L.).....do....	60	56	43	40	38	59	57	55	42	42	40	37	24
Molasses or sirup, in barrels or hhds.....do....	60	56	43	40	38	59	57	55	42	42	40	37	24
Potatoes, in barrels.....do....	86	81	66	61	58	92	88	84	62	62	60	57	37
Rice, in barrels, bags, casks, or tierces....do....	60	56	43	40	38	59	57	55	42	42	40	37	24
Salt, in sacks (L. C. L.).....do....	49	46	38	35	33	48	46	44	33	33	31	28	20
Sorghum, in barrels or hogsheads.....do....	60	56	43	40	38	59	57	55	42	42	40	37	24
Sugar, in barrels or hogsheads.....do....	49	46	38	35	33	48	46	44	33	33	31	28	20

N. O. S.—Not otherwise specified. C. L.—Car-load. L. C. L.—Less than car-load.

FREIGHT RATES—RAILROAD COMPANIES.

THE SOUTHERN RAILWAY AND STEAMSHIP ASSOCIATION—Continued.

Articles.	TO CHARLESTON AND PORT ROYAL, S. C., AND SAVANNAH AND BRUNSWICK, GA.										
	Chicago.		Peoria, Pekin, and Havana.		Saint Louis (store door) and East Saint Louis.		Cincinnati, all rail.	Louisville, Jeffersonville, Evansville, Cairo, East Cairo, and Henderson, all rail.	Columbus and Hickman, all rail.	Memphis depot, all rail.	Nashville, all rail.
	Rail and sea.	All rail.	Rail and sea.	All rail.	Rail and sea.	All rail.					
Apples, green, in barrels ..... per 100 lbs..	$1 05	$1 05	$1 01	$1 01	$0 97	$0 97	$0 75	$0 75	$0 73	$0 70	$0 57
Apples, dried ..... do....	90	90	87	87	84	84	70	70	68	65	55
Bacon, loose (L. C. L.) ..... do....	1 45	1 45	1 38	1 38	1 30	1 30	95	95	93	90	72
Bacon, loose (C. L.) ..... do....	1 05	1 05	1 01	1 01	97	97	75	75	73	70	57
Bacon, packed in wood ..... do....	45	53	43	51	41	49	39	39	37	34	31
Bacon, in bags ..... do....	1 05	1 05	1 01	1 01	97	97	75	75	73	70	57
Beans, in boxes ..... do....	1 20	1 20	1 15	1 15	1 10	1 10	80	80	1 78	75	60
Beans, in barrels ..... do....	75	75	73	73	71	71	58	58	56	53	45
Beef, smoked, in boxes or barrels ..... do....	1 05	1 05	1 01	1 01	97	97	75	75	73	70	57
Beef and pork, salted, in barrels ..... per bbl..	1 35	1 59	1 29	1 53	1 23	1 47	1 17	1 17	11	1 02	93
Butter, in kegs, tubs, and firkins ..... per 100 lbs..	1 20	1 20	1 15	1 15	1 10	1 10	80	80	78	75	60
Cabbage, packed ..... do....	1 05	1 05	1 01	1 01	97	97	75	73	73	70	57
Cheese ..... do....	90	90	87	87	84	84	70	70	68	65	55
Dried fruit (N. O. S.) ..... do....	1 05	1 05	1 01	1 01	97	97	75	75	73	70	57
Eggs, packed ..... do....	1 45	1 45	1 38	1 38	1 30	1 30	95	95	93	90	72
Flour, in barrels ..... per bbl..	76	92	72	88	68	84	70	70	66	60	56
Flour, in sacks ..... per 100 lbs..	40	48	38	46	36	44	36	36	34	31	28
Grain ..... do....	38	46	36	44	34	42	35	35	33	30	28
Hay, pressed, in bales (L. C. L.) ..... do....	75	75	73	73	71	71	58	58	56	53	45
Hay, pressed, in bales (C. L. or over) ..... do ..	38	46	36	44	34	42	35	35	33	30	28
Hoop-poles ..... do....	61	61	59	59	57	57	46	46	44	41	35
Hops, baled ..... do....	1 20	1 20	1 15	1 15	1 10	1 10	80	80	78	75	60
Lard ..... do....	90	90	87	87	84	84	70	70	68	65	55
Live stock (C. L.) ..... do....	1 45	1 45	1 38	1 38	1 30	1 30	95	95	93	90	72
Lumber, dressed (L. C. L.) ..... do....	1 05	1 05	1 01	1 01	97	97	75	75	73	70	57
Lumber, dressed (C. L.) ..... do....	75	75	73	73	71	71	58	58	56	53	45
Molasses or sirup, in barrels or hogsheads ..... do....	75	75	73	73	71	71	58	58	56	53	45
Potatoes, in barrels ..... do....	1 05	1 05	1 01	1 01	1 30	1 30	95	95	93	90	72
Rice, in barrels, bags, casks, or tierces ..... do....	75	75	73	73	71	71	58	58	56	53	45
Salt, in sacks (L. C. L.) ..... do....	61	61	59	59	57	57	46	46	44	41	35
Sorghum, in barrels or hogsheads ..... do....	75	75	73	73	71	71	58	58	56	53	45
Sugar, in barrels or hogsheads ..... do....	61	61	59	59	57	57	46	46	44	41	35

N. O. S.—Not otherwise specified. L. C. L.—Less than car-load. C. L.—Car-load.

FREIGHT RATES—THE SOUTHERN RAILWAY AND STEAMSHIP ASSOCIATION.

Cotton rates taking effect September 1, 1882.

NOTE.—These rates are per 100 pounds.

From—	To— Brunswick.	Savannah.	Port Royal, Charleston.	Wilmington.	Petersburg, Portsmouth, Norfolk, Richmond.	Baltimore.	New York, Philadelphia.	Fall River, Providence, Boston.
Columbia, S. C*	.....	.....	$0 27	$0 27	$0 38	$0 71	$0 76	$0 82
Augusta	.....	$0 27	27	27	38	71	76	82
Macon	$0 40	40	40	40	51	84	89	95
Milledgeville†								
Athens†								
Atlanta								
Rome	45	45	45	45	56	89	94	1 00
Dalton								
Chattanooga								
Fairburn	.....	59	59	59	70	1 03	1 08	1 14
Palmetto	.....	61	61	61	72	1 05	1 10	1 16
Newnan	.....	60	60	60	71	1 07	1 12	1 18
Grantville	.....	67	67	67	78	1 11	1 16	1 22
Hogansville	.....	67	67	67	78	1 11	1 16	1 22
La Grange	.....	71	71	71	82	1 15	1 20	1 26
West Point	.....	73	73	73	84	1 17	1 22	1 28
Opelika	.....	63	63	63	74	1 07	1 12	1 18
Montgomery	.....	45	45	45	56	89	94	1 00
Selma								
WESTERN AND ATLANTIC RAILROAD.								
Bolton								
Gilmore								
Vining's	57	57	57	57	68	1 01	1 06	1 12
Tunnell Hill								
Tilton								
McIver								
Smyrna								
Marietta								
Ringgold	59	59	59	59	70	1 03	1 08	1 14
Graysville								
Resaca								
Calhoun								
Big Shanty								
Chicamauga	61	61	61	61	72	1 05	1 10	1 16
McDaniel								
Adairsville								
Amnicola								
Kingston	63	63	63	63	74	1 07	1 12	1 18
Acworth								
Alatoona								
Bartow								
Stegall's								
Cartersville	65	65	65	65	76	1 09	1 14	1 20
Rogers								
Cass								
Albany, Ga	.....	52	.....	.....	.....	96	1 01	1 07

* These rates do *not* apply from Columbia to Port Royal.
These rates do *not* apply from Milledgeville and Athens to Brunswick.

FREIGHT RATES—STEAMBOAT COMPANIES.

MERCHANTS AND MINERS' TRANSPORTATION COMPANY.

Articles.	Baltimore to—					Baltimore from—				
	Norfolk.	New York.	Providence.	Boston.	Savannah.	Norfolk.	New York.	Providence.	Boston.	Savannah.
Flour, per bbl	$0 20	$0 20	$0 25	$0 25	$0 25	$0 20	$0 20	$0 25	$0 25	$0 25
Wheat, per bush	06	05	08	08	08	06	05	08	08	08
Corn, do	05	05	08	08	08	05	05	08	08	08
Rye, do	06	05	08	08	08	06	05	08	08	08
Barley, do	06	05	08	08	08	06	05	08	08	08
Oats, do	03	05	05	05	05	03	05	05	05	05
Beef, per bbl	30	25	60	60	60	30	25	60	60	60
Pork, do	30	25	60	60	60	30	25	60	60	60
Lard, per 100 lbs	10	10	15	15	15	10	10	15	15	15
Horses, per head	5 00	5 00	20 00	20 00	20 00	5 00	5 00	20 00	20 00	20 00
Mules, do	5 00	5 00	20 00	20 00	20 00	5 00	5 00	20 00	20 00	20 00
Cattle, do	5 00	5 00	15 00	15 00	15 00	5 00	5 00	15 00	15 00	15 00
Sheep, do	50	50	5 00	5 00	5 00	50	50	5 00	5 00	5 00
Dressed hogs, per 100 lbs	25	10	50	50	50	25	10	50	50	50
Lumber, per 1,000 ft	5 00	5 00	7 00	7 00	7 00	5 00	5 00	7 00	7 00	7 00
Shingles, per 1,000	1 00	2 50	2 00	2 00	2 00	1 00	2 50	2 00	2 00	2 00
Laths, do	1 50	2 00	3 00	3 00	3 00	1 50	2 00	3 00	3 00	3 00
Wool in bales, per 100 lbs	30	20	50	50	50	30	20	50	50	50
Tobacco, per hhd	75	1 50	3 00	3 00	3 00	75	1 50	3 00	3 00	3 00
Salt, per bbl	25	30	25	25	25	25	30	25	25	25
Peaches, per crate	12	20	25	25	25	12	20	25	25	25
Apples, per bbl	25	25	50	50	50	25	25	50	50	50
Plums, per box	12	20	25	25	25	12	20	25	25	25
Pears, per bbl	25	25	50	50	50	25	25	50	50	50
Pears, per box	12	20	25	25	25	12	20	25	25	25
Watermelons, per 100	3 00	5 00	7 00	7 00	7 00	3 00	5 00	7 00	7 00	7 00
Cantaloupes, do	2 00	3 00	5 00	5 00	5 00	2 00	3 00	5 00	5 00	5 00

FREIGHT RATES—STEAMBOAT COMPANIES.

Articles.	OLD DOMINION STEAMSHIP COMPANY.				NORWICH AND NEW YORK TRANSPORTATION COMPANY.				OLD COLONY STEAMBOAT COMPANY.	
	New York to—		New York from—		New York to—		Norwich to New York.	New London to New York.	New York to Boston.	Boston to New York.
	Norfolk.	Richmond.	Norfolk.	Richmond.	Norwich.	New London.				
Flour per bbl	$0 25	$0 28	$0 25	$0 26½	$0 20	$0 20	$0 20	$0 20	$0 20	$0 20
Wheat per bush	06	07½	06	07½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 10	Per 100, 10
Corn do	06	07½	06	07½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 10	Per 100, 10
Rye do	06	07½	06	07½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 10	Per 100, 10
Barley do	06	07½	06	07½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 12½	Per 100, 10	Per 100, 10
Oats do	06	07½	06	07½	Per 100, 10	Per 100, 10	Per 100, 10	Per 100, 10	Per 100, 10	Per 100, 10
Pork per bbl	35	38			30	30	30	30	30	30
Beef do	35	38			30	30	30	30	30	30
Lard per 100 lbs	15	15			Tierce, 50	Tierce, 50	Tierce, 50	Tierce, 50	Per bbl., 30	Per bbl., 30
Lard per tub					10	10	10	10		
Horses per head	8–9 00	8–10 25	8–9 00	8–10 25	4 00	4 00	4 00	4 00	1 horse, 9 00 2 or 3, each 7 50 7 or more, 5 00 (†)	1 horse, 9 00 2 or 3, each 7 50 7 or more, 5 00 (†)
Horses do										
Mules do	8–9 00	8–10 25	8–9 00	8–10 25	4 00	4 00	4 00	4 00		
Cattle do	8–9 00	8–10 25	8–9 00	8–10 25	4 00	4 00	4 00	4 00		
Sheep do	1 50	2 00	1 50	2 00	Dressed, 15	Dressed, 15	Dressed, 15	Dressed, 15	1 sheep, 4 50 2 or 3, each 3 75 7 or more, 2 50	1 sheep, 4 50 2 or 3, each 3 75 7 or more, 2 50
Sheep do										
Dressed hogs per 100 lbs					15	15	15	15	18	18
Lumber per 1,000 ft			5 & 6 00	5 & 6 00	3 00	3 00	3 00	3 00	Per 100, 15	Per 100, 15
Shingles per M			3–4 00	3–4 00					Per 100, 15	Per 100, 15
Laths do			5 & 6 00	5 & 6 00					Per 100, 15	Per 100, 15
Wool per bale			Per 100, 75	Per 100, 50	Per 100,* 15	Per 100,* 15	Per 100,* 15	Per 100,* 15	Per 100,* 18	Per 100,* 18
Wool do					Per 100,† 20	Per 100,† 20	Per 100,† 20	Per 100,† 20	Per 100,† 30	Per 100,† 30
Tobacco per hhd	2 00	2 20		2 35	Per 100, 15	Per 100, 15	Per 100, 15	Per 100, 15	Per 100, 12½	Per 100, 14
Salt per bbl	25	30			Per sack, 20	Per sack, 20	Per sack, 20	Per sack, 20	Per 100, 10	Per 100, 10
Peaches per crate			14	20		15	15	15	§06	§06
Apples per bbl	25	30	27	33 & 43		25	25	25	25	25
Plums per box			11	17	Per crate, 15	Per crate, 15	Per crate, 15	Per crate, 15	‖06	‖06
Watermelons per 100			2 50	4 00	O. R., 2 00	O. R., 2 00	O. R., 2 00	O. R., 2 00	Per bbl., 30	Per bbl., 30
Cantaloupes do			Per bbl., 27	Per bbl., 33	Per bbl., 25	Per bbl., 25	Per bbl., 25	Per bbl., 25	Per bbl., 30	Per bbl., 30
Pears per bbl			27	33 & 43	25	25	25	25	Per bbl., 30	Per bbl., 30
Pears per box			14	20	15	15	15	15	‖06	‖06
Cotton, uncomp'd per bale	1 25	1 25	1 25	1 25						
Molasses per bbl					60	60	60	60	Per gallon, 01⅛	Per gallon, 01⅛
Sirup do					60	60	60	60	Per gallon, 01⅛	Per gallon, 01⅛

* Compressed. † Not compressed. ‡ Mules and cattle same as horses. § Cubic foot, in crates. ‖ Cubic foot, in boxes.

FREIGHT RATES—STEAMBOAT COMPANIES.

Articles.	INLAND AND SEABOARD COASTING COMPANY.				BOSTON AND PHILADELPHIA LINE.	
	New York from—		New York to—		Boston to—	Boston from—
	Georgetown.	Alexandria.	Georgetown.	Alexandria.	Philadelphia.	Philadelphia.
Flour ..... per bbl	In lots..$0 25	In lots..$0 30	$0 40	$0 40	$0 25	$0 25
Wheat ..... per bush	Special rates.	Special rates.	Special rates.	Special rates.	10	10
Corn ..... do					10	10
Rye ..... do					10	10
Barley ..... do					10	10
Oats ..... do					10	10
Pork ..... per bbl	60	60	60	60	40	40
Beef ..... do	60	60	60	60	40	40
Lard ..... per 100 lbs	20	20	20	20	15	15
Horses ..... per head	10 00	10 00	10 00	10 00	12 00	12 00
Mules ..... do	10 00	10 00	10 00	10 00	12 00	12 00
Cattle ..... do	10 00	10 00	10 00	10 00	10 00	10 00
Dressed hogs ..... per 100 lbs	25	25	25	25	.....	.....
Lumber (hardwood, released) ..... do	15	15	15	15	.....	.....
Lumber (pine, released) ..... do	20	20	20	20	9 00	9 00
Shingles ..... per M	1 00	1 00	1 00	1 00	50	50
Laths ..... do	1 00	1 00	1 00	1 00	.....	.....
Wool ..... per 100 lbs	40	40	40	40	25	25
Tobacco (in hhds) ..... do	40	40	40	40	18	18
Salt ..... per bbl	40	40	40	40	35	35
Apples ..... do	40	40	40	40	20	20
Peaches ..... per crate	.....	.....	.....	.....	12	12
Plums ..... per box	.....	.....	.....	.....	12	12
Pears ..... per bbl	40	40	40	40	20	20
Pears ..... per box	Special rates.	Special rates.	Special rates.	.....	12	12
Watermelons ..... per 100					3 50	3 50
Cantaloupes ..... do					3 50	3 50

NOTE.—Rates on farm animals of Inland and Seaboard Coasting Company are for shipment at owner's risk. If shipped at company's risk, 50 per cent. is added.

FREIGHT RATES—STEAMBOAT COMPANIES.

Articles.	MAINE STEAMSHIP COMPANY.		PORTLAND STEAM-PACKET COMPANY.	
	New York to Portland, Me.	Portland to New York.	Portland to Boston.	Boston to Portland.
Flour ..... per bbl..	$0 25	$0 25	$0 15	$0 15
Wheat ..... per bush..	08	08	06	06
Corn ..... do....	08	08	06	06
Rye ..... do....	08	08	06	06
Barley ..... do....	08	08	06	06
Oats ..... do....	08	08	06	06
Pork ..... per bbl..	40	40	20	20
Beef ..... do....	40	40	20	20
Lara ..... per 100 lbs .	15	15	Per bbl., 30	Per bbl., 30
Horses ..... per head ...	10 00	10 00	3 00	3 00
Mules ..... do....	10 00	10 00	3 00	3 00
Cattle ..... do....	10 00	10 00	2 50	2 50
Sheep ..... do ..	5 00	5 00	20	20
Dressed hogs ..... do....	.....	.....	20	20
Lumber ..... per 1. 000 ft..	.....	.....	3 00	3 00
Shingles ..... per 1, 000 ...	.....	.....	50	50
Laths ..... do....	.....	.....	50	50
Wool ..... per 100 lbs..	15	15	Per bale, 25	Per bale, 25
Tobacco ..... per hhd..	2 00	2 00	2 00	2 00
Salt ..... per bbl..	35	35	25	25
Peaches ..... per crate..	.....	.....	10	10
Apples ..... per bbl..	30	30	15	15
Pears ..... do....	30	30	10	10
Pears ..... per box..	15	15	15	15
Plums ..... do....	15	15	10	10
Vegetables ..... per bbl..	30	30	Per 100, 10	Per 100, 10
Potatoes ..... do....	30	30	.....	.....
Watermelons ..... per 100..	2 00	2 00	2 00	2 00
Cantaloupes ..... do....	2 00	2 00	1 00	1 00

FREIGHT RATES—STEAMBOAT COMPANIES.

Articles.	OCEAN STEAMSHIP COMPANY OF SAVANNAH. New York to Savannah.	NEW YORK AND CHARLESTON STEAMSHIP COMPANY. New York to Charleston.	SAVANNAH LINE. Boston to Charleston.
Flour (in sacks)* per 100 lbs	$0 17	$0 17	Per bbl., $0 20
Wheat (in bags) do	15	15	Per bush., 15
Corn (in bags) do	15	15	Per bush., 15
Barley (in bags) do		20	Per bush., 15
Oats (in bags) do	15	15	Per bush., 15
Pork per barrel	60	60	60
Beef do	60	60	60
Lard (barrels and tierces) per 100 lbs	15	15	Per bbl., 20
Horses per head	Released, 20 00	Released, 20 00	18 00
Mules do	Released, 20 00	Released, 20 00	18 00
Cattle do	Released, 20 00	Released, 20 00	18 00
Sheep† per cu. ft.	20	20	
Lumber, ordinary per 1,000 ft.	10 00	10 00	9 00
Shingles (in bundle per 1,000	Special		
Salt, table‡ per 100 lbs	25	25	20
Apples§ per bbl	40	40	
Dried fruits and berries per 100 lbs	30		
Peas, and beans (dried) do	20		
Butter do	40	40	
Cheese do	30	30	
Hops cu. ft.	08		
Eggs, released per bbl	1 00		
Eggs (in boxes), released per cu. ft.	08		
Fowls (in coops), released, P. P do	20		
Rice per 100 lbs	25		
Potatoes per bbl	30	30	
Vegetables (except onions and cabbage) do	30	30	
Vinegar do	60		
Wool per 100 lbs			40
Cotton per bale			2 00
Tobacco per 100 lbs			25
Watermelons per 100			8 00

* Fifty sacks or over, prepared and released, per 100 pounds, 15 cents.
† Sheep, pigs, and calves, in boxes, per cubic foot, 20 cents.
‡ Liverpool and released, per sack, 20 cents. Released and shipments of 500 sacks or over, per 100 pounds, 8 cents.
§ In shipments of 25 barrels to one consignee, per barrel, 35 cents.
NOTE.—All kinds of lumber in shipments of 3,000 feet subject to deduction of 20 per cent, ship's option.